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Effective: 14-January-2010
Expires: 11-February-2010

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INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS

ADRIAN, MI

LENAWEE COUNTY ..... **RNAV (GPS) Rwy 5**
RNAV (GPS) Rwy 23
NA when local weather not available.

ALPENA, MI

ALPENA COUNTY RGNL ... **RNAV (GPS) Rwy 1**
NA when local weather not available.

ANN ARBOR, MI

ANN ARBOR MUNI ..... **RNAV (GPS) Rwy 6[1]**
RNAV (GPS) Rwy 24[1]
VOR Rwy 6[2]
VOR Rwy 24[2]
[1]NA when local weather not available.
[2]NA when control tower closed.

BAD AXE, MI

HURON COUNTY
MEMORIAL ..... **RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 35
NA when local weather not available.

BATTLE CREEK, MI

W.K. KELLOGG ..... **ILS or LOC Rwy 23[1]**
RADAR-1[2]
RNAV (GPS) Rwy 5[3]
RNAV (GPS) Rwy 23[3]
VOR or TACAN Rwy 5[4]
VOR Rwy 23[3]
VOR or TACAN or GPS Rwy 31[4]
[1]NA when control tower closed.
[2]NA when Kalamazoo control tower closed.
[3]NA when local weather not available.
[4]NA when control tower closed except for operators with approved weather reporting service.

NAME ALTERNATE MINIMUMS

BEAVER ISLAND, MI

BEAVER ISLAND ..... **RNAV (GPS) Rwy 27**
NA when local weather not available.

BELLAIRE, MI

ANTRIM COUNTY ..... **RNAV (GPS) Rwy 2[1,2]**
VOR Rwy 2[3]
[1]NA when local weather not available.
[2]Category D, 900-2¾.
[3]Categories A,B, 1000-2;Category C, 1000-2¾;
Category D, 1000-3.

BENTON HARBOR, MI

SOUTHWEST
MICHIGAN RGNL ..... **RNAV (GPS) Rwy 9**
VOR Rwy 9
NA when local weather not available.

CADILLAC, MI

WEXFORD COUNTY ..... **NDB Rwy 7[1]**
NDB Rwy 25[2]
RNAV (GPS) Rwy 7[3]
RNAV (GPS) Rwy 25[3]
[1]Categories, A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[2]Category D, 800-2¼.
[3]NA when local weather not available.

CARO, MI

TUSCOLA AREA ..... **RNAV (GPS) Rwy 5**
RNAV (GPS) Rwy 23
VOR/DME-A
NA when local weather not available.

CHARLEVOIX, MI

CHARLEVOIX MUNI ..... **RNAV (GPS) Rwy 9**
NA when local weather not available.

NAME ALTERNATE MINIMUMS

CHARLOTTE, MI

FITCH H BEACH ..... **RNAV (GPS) Rwy 20**
NA when local weather not available.

COLDWATER, MI

BRANCH COUNTY
MEMORIAL ..... **RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
VOR Rwy 7
VOR/DME Rwy 25
NA when local weather not available.

DETROIT, MI

COLEMAN A.
YOUNG MUNI ..... **ILS or LOC Rwy 33[1]**
NDB Rwy 15[2]
RNAV (GPS) Rwy 15[2]
RNAV (GPS) Rwy 33[2]
VOR Rwy 33[2]
[1]ILS, 700-2.
[2]NA when local weather not available.

WILLOW RUN ..... **VOR or GPS-A**
Category D, 800-2¼.

DETROIT/GROSSE ILE, MI

GROSSE ILE MUNI ..... **NDB Rwy 4[1]**
RNAV (GPS) Rwy 4[2]
RNAV (GPS) Rwy 22[2]
VOR-A[2]
NA when local weather not available.
[1]Category A, B, 1000-2; Category C, 1000-2¾; Category D, 1000-3.
[2]Category A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.

ESCANABA, MI

DELTA COUNTY ..... **ILS or LOC Rwy 9[1]**
LOC BC Rwy 27[2]
RNAV (GPS) Rwy 9[23]
RNAV (GPS) Rwy 27[23]
VOR Rwy 9[23]
VOR Rwy 27[23]
VOR Rwy 36[2]
[1]ILS, Category C, 700-2; Category D, 800-2¼. LOC, Category D, 800-2¼.
[2]Category D, 800-2¼.
[3]NA when local weather not available.

FLINT, MI

BISHOP INTL ..... **ILS Rwy 9[12]**
ILS Rwy 27[2]
RADAR-1[2]
RNAV (GPS) Rwy 27[3]
[1]LOC, DME required
[2]NA when control tower closed.
[3]NA when local weather not available.

NAME ALTERNATE MINIMUMS

FRANKFORT, MI

FRANKFORT DOW
MEMORIAL FIELD ..... **RNAV (GPS) Rwy 15[1]**
RNAV (GPS) Rwy 33[1]
VOR/DME-A[2]
NA when local weather not available.
[1]Category C, 900-2¾.
[2]Categories A,B, 900-2; Category C, 900-2¾.

FREMONT, MI

FREMONT MUNI ..... **RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36
VOR Rwy 18
VOR Rwy 36
NA when local weather not available.

GAYLORD, MI

GAYLORD RGNL ..... **ILS Rwy 9[1]**
VOR or GPS Rwy 9[2]
VOR or GPS Rwy 27[2]
[1]ILS,Categories B,C, 700-2; Category D, 800-2½. LOC, Category D, 800-2½.
[2]Category D,800-2½.

GRAND RAPIDS, MI

GERALD R. FORD INTL . **ILS or LOC Rwy 8R[1]**
ILS or LOC Rwy 26L[1]
ILS or LOC Rwy 35[12]
RADAR-1[3]
RNAV (GPS) Rwy 8L[1]
RNAV (GPS) Rwy 8R[1]
RNAV (GPS) Rwy 17[1]
RNAV (GPS) Rwy 26L[1]
RNAV (GPS) Rwy 26R[1]
RNAV (GPS) Rwy 35[1]
VOR Rwy 35[1]
[1]NA when local weather not available.
[2]ILS, Categories A, B, C, 700-2; Category D, 700-2¼. LOC, Category D, 800-2¼.
[3]NA when control tower is closed.

GRAYLING, MI

GRAYLING AAF ..... **RNAV (GPS) Rwy 14**
NA when local weather not available.

HANCOCK, MI

HOUGHTON
COUNTY MEMORIAL ..... **ILS or LOC Rwy 31[12]**
LOC/DME BC Rwy 13[23]
RNAV (GPS) Rwy 31[3]
VOR Rwy 25[3]
VOR Rwy 31[3]
[1]ILS, Category D, 700-2¼; LOC, Category D, 800-2¼.
[2]NA when local weather not available.
[3]Category D, 800-2¼.

NAME ALTERNATE MINIMUMS

HARBOR SPRINGS, MI

HARBOR SPRINGS ..... **RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
NA when local weather not available.
Category B, 900-2.

HOLLAND, MI

TULIP CITY ..... **RNAV (GPS) Rwy 8**
RNAV (GPS) Rwy 26
NA when local weather not available.

HOUGHTON LAKE, MI

ROSCOMMON COUNTY-
BLODGETT MEMORIAL ..... **RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
NA when local weather not available.

HOWELL, MI

LIVINGSTON COUNTY
SPENCER J HARDY ..... **RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR Rwy 31
NA when local weather not available.

IRON MOUNTAIN-KINGSFORD, MI

FORD ..... **RNAV (GPS) Rwy 1**
RNAV (GPS) Rwy 19
VOR Rwy 31
NA when local weather not available.

IRONWOOD, MI

GOGEBIC-
IRON COUNTY ..... **RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
VOR/DME Rwy 9
VOR/DME Rwy 27
NA when local weather not available.
Category A, B, 900-2; Category C, 900-2½; Category D, 1000-3.

JACKSON, MI

JACKSON COUNTY-REYNOLDS
FIELD ..... **ILS Rwy 24[1,2]**
NDB Rwy 24[1]
RNAV (GPS) Rwy 6[3]
RNAV (GPS) Rwy 14[3]
RNAV (GPS) Rwy 24[3]
RNAV (GPS) Rwy 32[3]
VOR Rwy 6[3]
VOR Rwy 14[3]
VOR Rwy 32[3]
VOR/DME Rwy 24[3]
[1]NA when control tower closed.
[2]ILS, Category D, 700-2.
[3]NA when local weather not available.

NAME ALTERNATE MINIMUMS

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK
INTL ..... **ILS or LOC Rwy 35[1]**
LOC BC Rwy 17[1]
NDB Rwy 35[1]
RADAR-1[1]
VOR Rwy 5[1,2]
VOR Rwy 23[3]
[1]NA when control tower closed.
[2]Category D, NA.
[3]NA when control tower closed, except for operators with approved weather reporting service.

LUDINGTON, MI

MASON COUNTY ..... **RNAV (GPS) Rwy 8**
RNAV (GPS) Rwy 26
NA when local weather not available.

MANISTEE, MI

MANISTEE
COUNTY-BLACKER ..... **ILS Rwy 27**
ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.

MARQUETTE, MI

SAWYER INTL ..... **ILS Rwy 1**
LOC, NA.

MENOMINEE, MI

MENOMINEE-MARINETTE
TWIN COUNTY ..... **RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 21
RNAV (GPS) Rwy 32
VOR-A
NA when local weather not available.

MIDLAND, MI

JACK BARSTOW ..... **RNAV (GPS) Rwy 6**
RNAV (GPS) Rwy 24
VOR-A
NA when local weather not available.

MONROE, MI

CUSTER ..... **RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 21
VOR Rwy 3[1]
VOR Rwy 21
NA when local weather not available.
[1]Category D, 800-2¼.

MOUNT PLEASANT, MI

MOUNT PLEASANT MUNI ... **RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
VOR Rwy 27
NA when local weather not available.

NAME ALTERNATE MINIMUMS

MUSKEGON, MI

MUSKEGON COUNTY ..... **ILS Rwy 24[1]**
ILS or LOC Rwy 32[1]
LOC BC Rwy 14[12]
RADAR-1[1]
RNAV (GPS) Rwy 14[2]
RNAV (GPS) Rwy 32[2]
VOR-A[1]

[1]NA when control tower closed.
[2]NA when local weather not available.

OSCODA, MI

OSCODA-WURTSMITH ..... **RNAV (GPS) Rwy 6**
NA when local weather not available.

OWOSSO, MI

OWOSSO COMMUNITY ... **RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
VOR/DME Rwy 28
NA when local weather not available.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF
EMMET COUNTY ..... **ILS or LOC Rwy 32[12]**
RNAV (GPS) Rwy 5[13]
RNAV (GPS) Rwy 23[14]
RNAV (GPS) Rwy 32[14]
VOR/DME Rwy 5[3]
VOR Rwy 23[14]

[1]NA when local weather not available.
[2]ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.
[3]Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[4]Category D, 800-2¼.

PONTIAC, MI

OAKLAND COUNTY
INTL ..... **ILS or LOC Rwy 9R[12]**
LOC BC Rwy 27L[1]
RNAV (GPS) Rwy 9R[3]
RNAV (GPS) Rwy 27L[3]
VOR Rwy 9R[3]
VOR Rwy 27L[3]

[1]NA when control tower closed.
[2]ILS, LOC, Categories A, B, C, D, 700-2.
[3]NA when local weather not available.

NAME ALTERNATE MINIMUMS

SAGINAW, MI

SAGINAW COUNTY
H W BROWNE ..... **ILS or LOC/DME Rwy 27**
RNAV (GPS) Rwy 9[1]
RNAV (GPS) Rwy 27
NA when local weather not available.
[1]Category C, 800-2¼.

SAGINAW, MI (CON'T)

MBS INTL ..... **ILS or LOC Rwy 5[1]**
ILS Rwy 23[2]
RADAR-1[1]
RNAV (GPS) Rwy 5[3]
RNAV (GPS) Rwy 14[3]
RNAV (GPS Rwy 23[3]
RNAV (GPS) Rwy 32[3]
VOR Rwy 5[4]
VOR Rwy 14[4]
VOR Rwy 32[4]

[1]NA when control tower closed.
[2]DME or radar required; NA when control tower closed.
[3]NA when local weather not available.
[4]NA for NON-DME equipped aircraft when control tower closed.

SAULT STE MARIE, MI

CHIPPEWA
COUNTY INTL ..... **RNAV (GPS) Rwy 16**
RNAV (GPS) Rwy 34
VOR-A[1]
NA when local weather not available.
[1]DME standard, ADF NA.

SOUTH HAVEN, MI

SOUTH HAVEN
AREA RGNL ..... **RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 22
VOR Rwy 22
NA when local weather not available.

SPARTA, MI

PAUL C MILLER-
SPARTA ..... **RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
VOR-A
NA when local weather not available.

NAME ALTERNATE MINIMUMS

STURGIS, MI

KIRSCH MUNI ..... **RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36

NA when local weather not available.
Category D, 800-2¼.

TRAVERSE CITY, MI

CHERRY CAPITAL ..... **ILS Rwy 28[1,2]**
NDB or GPS Rwy 28[2,3]
RNAV (GPS) Rwy 10[4,5]
VOR or TACAN or GPS-A[3]

[1]ILS, Categories A,B, 800-2; Category C, 800-2¼; Category D, 800-2½. LOC,Category C, 800-2¼; Category D, 800-2½.
[2]NA when control tower closed.
[3]Category C, 800-2¼, Category D, 800-2½.
[4]Categories A, B, 1400-2; Categories C, D, 1400-3.
[5]NA when local weather not available.

WEST BRANCH, MI

WEST BRANCH
COMMUNITY ..... **RNAV (GPS) Rwy 9[1]**
RNAV (GPS) Rwy 27

NA when local weather not available.
[1]Category C, 800-2¼; Category D, 800-2½.

BATTLE CREEK, MI
W. K. KELLOGG

Amdt. 2, DEC 13,1990 (FAA) ELEV **952**

RADAR - 119.2 340.9

	RWY GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
CIRCLING		A	**1420**-1	468	(500-1)	B	**1440**-1	488	(500-1)
		C	**1480**-1½	528	(600-1½)	D	**1520**-2	568	(600-2)
		E	**1740**-2¾	788	(800-2¾)				

When Kalamazoo control tower closed, procedure not authorized.
When Battle Creek control tower closed, use Kalamazoo altimeter setting and increase all MDA's 60 feet and Category E visibility ¼ mile.

FLINT, MI
BISHOP INTL

Amdt. 8A, APR 13, 2006 (FAA) ELEV **782**

RADAR - 118.8 257.9

	RWY GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	36	ABC	**1180**-1	398	(400-1)	D	**1180**-1¼	398	(400-1¼)
	18	AB	**1300**-1	523	(600-1)	C	**1300**-1½	523	(600-1½)
		D	**1300**-1¾	523	(600-1¾)				
	27	ABC	**1240**-¾	470	(500-¾)	D	**1240**-1	470	(500-1)
CIRCLING		AB	**1300**-1	518	(600-1)	C	**1300**-1½	518	(600-1½)
		D	**1340**-2	558	(600-2)				

CAUTION: Brightly lighted parking lot 4000' E of approach end of rwy 27 can easily be confused for rwy 27.
For inoperative MALSR, increase ASR Rwy 27 Categories A and B visibility to 1.

GRAND RAPIDS, MI
GERALD R. FORD INTL

Amdt. 10B, AUG 13, 1998 (FAA) ELEV **794**

RADAR - 128.4 257.6

	RWY GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	26L	ABC	**1100**/24	310	(400-½)	D	**1100**/50	310	(400-1)
	26R	ABC	**1180-1**	386	(400-1)	D	**1180**-1¼	386	(400-1¼)
	8R	AB	**1200**-½	406	(500-½)	C	**1200**-¾	406	(500-¾)
		D	**1200**-1	406	(500-1)				
	8L	AB	**1200-1**	413	(500-1)	CD	**1200**-1¼	413	(500-1¼)
CIRCLING		AB	**1280**-1	486	(500-1)	C	**1280**-1½	486	(500-1½)
		D	**1360**-2	566	(600-2)				

When control tower closed, ASR not authorized.

KALAMAZOO, MI

Amdt. 9, OCT 25, 2007 (FAA) ELEV **874**

KALAMAZOO/BATTLE CREEK INTL

RADAR-1 121.2 340.9

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	35		AB	**1280**/24	412	(500-½)	C	**1280**/40	412	(500-¾)
			D	**1280**/50	412	(500-1)				
	17		AB	**1320**-1	453	(500-1)	C	**1320**-1¼	453	(500-1¼)
			D	**1320**-1½	453	(500-1½)				
CIRCLING			AB	**1380**-1	506	(600-1)	C	**1380**-1½	506	(600-1½)
			D	**1440**-2	566	(600-2)				

For inoperative MALSR, increase S-35 Cat D visibility to RVR 6000.
When control tower closed, ASR NA.

LANSING, MI

Amdt. 15, AUG 27, 2009 (FAA) ELEV **861**

CAPITAL CITY

RADAR - 118.65 133.475 226.4

	RWY	GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	10R		ABC	**1260**/24	399	(400-½)	D	**1260**/50	399	(400-1)
	28L		AB	**1320**/24	469	(500-½)	C	**1320**/40	469	(500-¾)
			D	**1320**/50	469	(500-1)				
	6		AB	**1320**-1	462	(500-1)	C	**1320**-1¼	462	(500-1¼)
			D	**1320**-1½	462	(500-1½)				
	24		AB	**1260**-1	403	(400-1)	CD	**1260**-1¼	403	(400-1¼)
CIRCLING			AB	**1380**-1	519	(600-1)	C	**1380**-1½	519	(600-1½)
			D	**1440**-2	579	(600-2)				

For inoperative MALSR, increase S-10R Cat D visibility to RVR 6000.
Visibility reduction by helicopters NA for Rwy 6, and Rwy 24.
Lost Communications (All Rwys): As directed by ATC on initial contact.

MUSKEGON, MI

Amdt. 14, JUN 24, 1993 (FAA)

ELEV **628**

MUSKEGON COUNTY

RADAR - 119.8 339.1

	RWY GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	24	AB	**1040**-½	413	(500-½)	C	**1040**-¾	413	(500-¾)
		D	**1040**-1	413	(500-1)				
	32	AB	**1060/**24	433	(500-½)	C	**1060**/40	433	(500-¾)
		D	**1060**/50	433	(500-1)				
	14	AB	**1080**-1	452	(500-1)	C	**1080**-1¼	452	(500-1¼)
		D	**1080**-1½	452	(500-1½)				
	6	AB	**1160**-1	537	(600-1)	C	**1160**-1½	537	(600-1½)
		D	**1160**-1¾	537	(600-1¾)				
CIRCLING		AB	**1160**-1	532	(600-1)	C	**1180**-1½	552	(600-1½)
		D	**1220**-2	592	(600-2)				

For inoperative MALSR, increase Category D S-24 visibility ¼ mile.
When control tower closed, procedure NA.

SAGINAW, MI

Amdt. 9, AUG 1, 1985 (FAA)

ELEV **668**

MBS INTL

RADAR - 120.95 126.45 235.625

	RWY GS/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATh/ HAA	CEIL-VIS
ASR	23	ABC	**1020**-½	359	(400-½)	D	**1020**-1	359	(400-1)
	5	ABC	**1060**/24	394	(400-½)	D	**1060**/50	394	(400-1)
CIRCLING		A	**1100**-1	432	(500-1)	B	**1120**-1	452	(500-1)
		C	**1120**-1½	452	(500-1½)	D	**1220**-2	552	(600-2)

Category D S-5 visibility increased to RVR 6000 for inoperative SSALR.
Category D S-23 visibility increased ¼ mile for inoperative MALSR.
When control tower not in operation, procedure NA.

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude , and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

ADRIAN, MI

LENAWEE COUNTY (ADG)
ORIG 07130 (FAA)
TAKE-OFF MINIMUMS: **Rwys 11, 29,** NA-ATC.
NOTE: **Rwy 5,** multiple trees beginning 1837' from departure end of runway, 149' left of centerline, up to 75' AGL/873' MSL. Multiple trees beginning 953' from departure end of runway, 146' right of centerline, up to 74' AGL/872' MSL. **Rwy 23,** tree 1231' from departure end of runway, 633' left of centerline, 55' AGL/849' MSL.

ALLEGAN, MI

PADGHAM FIELD (35D)
AMDT 1 09183 (FAA)
TAKE-OFF MINIMUMS: **Rwys 14, 29, 32,** 300-1.

NAME TAKE-OFF MINIMUMS

ALMA, MI

GRATIOT COMMUNITY (AMN)
ORIG 09351 (FAA)
TAKE-OFF MINIMUMS: **Rwy 9,** 400-3 or std. w/ min. climb of 251' per NM to 1400.
NOTE: **Rwy 9,** multiple trees beginning 841' from DER, 438' right of centerline, up to 58' AGL/817' MSL. Multiple trees beginning 1383' from DER, 380' left of centerline, up to 71' AGL/820' MSL. **Rwy 18,** multiple trees beginning 1067' from DER, 152' right of centerline, up to 70' AGL/829' MSL. Multiple trees beginning 923' from DER, 374' left of centerline, up to 70' AGL/824' MSL. **Rwy 27,** multiple trees beginning 306' from DER, 272' right of centerline, up to 81' AGL/840' MSL. Multiple trees beginning 1168' from DER, 593' left of centerline, up to 93' AGL/852' MSL. **Rwy 36,** multiple trees beginning 239' from DER, 3' right of centerline, up to 86' AGL/845' MSL. Multiple trees beginning 143' from DER, 38' left of centerline, up to 103' AGL/852' MSL.

ALPENA, MI

ALPENA COUNTY RGNL (APN)
ORIG 09015 (FAA)

NOTE: **Rwy 1,** tree 2293' from departure end of runway, 525' left of centerline, 100' AGL/749' MSL. **Rwy 7,** trees beginning 858' from departure end of runway, 567' right of centerline up to 100' AGL/774' MSL. Trees beginning 1059' from departure end of runway, 166' left of centerline up to 100' AGL/769' MSL. **Rwy 19,** trees beginning 1789' from departure end of runway, 270' left of centerline up to 100' AGL/779' MSL. Trees beginning 1049' from departure end of runway, 777' right of centerline up to 100' AGL/789' MSL. Vent on cable 44' from departure end of runway, 147' left of centerline up to 25' AGL/685' MSL. **Rwy 25,** trees beginning 652' from departure end of runway, 53' left of centerline up to 100' AGL/755' MSL. Trees beginning 1021' from departure end of runway, 275' right of centerline up to 100' AGL/751' MSL.

ANN ARBOR, MI

ANN ARBOR MUNI (ARB)
AMDT 8 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwys 12, 30,** NA-Environmental.

NOTE: **Rwy 6,** multiple trees beginning 442' from departure end of runway, 47' right of centerline, up to 79' AGL/899' MSL. Building 312' from departure end of runway, 479' right of centerline, 15' AGL/838' MSL. Multiple trees beginning 635' from departure end of runway, 182' left of centerline, up to 59' AGL/887' MSL. Building 99' from departure end of runway, 351' left of centerline, 22' AGL/849' MSL. **Rwy 24,** multiple trees beginning 479' from departure end of runway, 473' left of centerline, up to 100' AGL/929' MSL. Multiple trees beginning 462' from departure end of runway, 486' right of centerline, up to 50' AGL/885' MSL. Terrain 138' from departure end of runway, 475' right of centerline, 0' AGL/837' MSL.

BAD AXE, MI

HURON COUNTY MEMORIAL (BAX)
AMDT 4 07354 (FAA)

NOTE: **Rwy 4,** vehicle on road 244' from departure end of runway, 531' left of centerline, 15' AGL/774' MSL. Tree 810' from departure end of runway, 43' left of centerline, 100' AGL/859' MSL. Vehicle on road 223' from departure end of runway, 470' right of centerline, 15' AGL/774' MSL. **Rwy 17,** vehicle on road 164' from departure end of runway, on centerline, 15' AGL/784' MSL. Bush 81' from departure end of runway, 497' right of centerline, 4' AGL/757' MSL. Railroad 695' from departure end of runway, 684' right of centerline, 23' AGL/792' MSL. Terrain beginning 222' from departure end of runway, 70' right of centerline, 0' AGL/757' MSL. Trees beginning 855' from departure end of runway, 392' right of centerline, up to 100' AGL/879' MSL. Pole 1135' from departure end of runway, 755' left of centerline, 35' AGL/798' MSL. Terrain beginning 44' from departure end of runway, 9' left of centerline, 0' AGL/765' MSL. Trees beginning 1693' from departure end of runway, 372' left of centerline, up to 100' AGL/859' MSL. **Rwy 22,** terrain beginning 3' from departure end of runway, 172' left of centerline, 0' AGL/765' MSL. Tree 2334' from departure end of runway, 422' left of centerline, 100' AGL/869' MSL. Terrain beginning 49' from departure end of runway, 165' right of centerline, 0' AGL/762' MSL. Railroad 41' from departure end of runway, 390' right of centerline, 23' AGL/782' MSL. **Rwy 35,** antenna on tower 355' from departure end of runway, 478' right of centerline, 34' AGL/793' MSL. Antenna 359' from departure end of runway, 477' right of centerline, 30' AGL/793' MSL. Vehicle on road 575' from departure end of runway, 412' right of centerline, 15' AGL/778' MSL. Trees beginning 1259' from departure end of runway, 53' right of centerline, up to 100' AGL/842' MSL. Trees beginning 1509' from departure end of runway, 375' left of centerline, up to 100' AGL/859' MSL. Tower 1085' from departure end of runway, 698' left of centerline, 63' AGL/822' MSL.

BALDWIN, MI

BALDWIN MUNI (7D3)
ORIG 84075 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 9, 23, 27,** 300-1.

BATTLE CREEK, MI

W. K. KELLOGG (BTL)
AMDT 2 91346 (FAA)

TAKE-OFF MINIMUMS: **Rwys 13, 31,** 300-1.

DEPARTURE PROCEDURE: **Rwy 31,** climb runway heading to 1400 before turning.

BAY CITY, MI

JAMES CLEMENTS MUNI (3CM)
AMDT 5 86128 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 18, 23, 27, 36,** 300-1. **Rwy 5,** 900-2.

DEPARTURE PROCEDURE: **Rwys 23, 27, 36,** climb runway heading to 2100 before turning. **Rwy 9,** left turn climb heading 070° to 2100 before turning. **Rwy 5,** right turn climb heading 070° to 2100 before turning. **Rwy 18,** right turn climb heading 230° to 2100 before turning.

BEAVER ISLAND, MI
BEAVER ISLAND (SJX)
ORIG 98001 (FAA)
TAKE-OFF MINIMUMS: **Rwys 9,27,** 300-1.
Rwys 5,14,23,32, NA.

BELLAIRE, MI
ANTRIM COUNTY (ACB)
AMDT 6 06215 (FAA)
TAKE-OFF MINIMUMS: **Rwy 2,** 700-3 or std. w/ a min. climb of 417' per NM to 1500.
DEPARTURE PROCEDURE: **Rwy 2,** climb heading 022° to 1200 before turning right. **Rwy 20,** climb heading 202° to 1300 before turning left.
NOTE: **Rwy 2,** road 385' from departure end of runway, 528' right of centerline, 15' AGL/646' MSL. Multiple trees beginning 2535' from departure end of runway, 96' left of centerline, up to 100' AGL/884' MSL. Multiple trees beginning 406' from departure end of runway, 235' right of centerline, up to 100' AGL/1147' MSL. Tower 2.57 NM from departure end of runway, 3271' right of centerline, 168' AGL/1198' MSL.
Rwy 20, multiple trees beginning 64' from departure end of runway, 204' right of centerline up to 100' AGL/693' MSL. Multiple buildings and antenna on tower beginning 2641' from departure end of runway, 909' right of centerline, up to 121' AGL/721' MSL. Multiple trees beginning 125' from departure end of runway, 220' left of centerline, up to 100' AGL/720' MSL.

BENTON HARBOR, MI
SOUTHWEST MICHIGAN RGNL (BEH)
AMDT 5 86212 (FAA)
TAKE-OFF MINIMUMS: **Rwy 9,** 300-1 or std. with min. climb of 300' per NM to 1100. **Rwys 13, 18, 31, 36,** 300-1.
DEPARTURE PROCEDURE: **Rwy 27,** climb runway heading to 1100 before turning.

BERRIEN SPRINGS, MI
ANDREW UNIVERSITY AIRPARK (C20)
ORIG 03023 (FAA)
TAKE-OFF MINIMUMS: **Rwys 3, 13, 21,** NA. **Rwy 31,** 700-1½ or std. with a min. climb of 260' per NM to 1500. NA at night.
NOTE: **Rwy 31,** tower 6789' northeast of departure end of runway, 565' AGL/1224' MSL.

BIG RAPIDS, MI
ROBEN-HOOD (RQB)
AMDT 5 96116 (FAA)
TAKE-OFF MINIMUMS: **Rwys 14, 27,** 300-1.

BOYNE FALLS, MI
BOYNE MOUNTAIN (BFA)
AMDT 3 96340 (FAA)
TAKE-OFF MINIMUMS: **Rwy 17,** 1000-1. **Rwy 35,** 500-1.
DEPARTURE PROCEDURE: **Rwys 17,35,** climb runway heading to 2000 before turning.

CADILLAC, MI
WEXFORD COUNTY (CAD)
AMDT 7 09183 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18, 36,** NA-Environmental.
DEPARTURE PROCEDURE: **Rwy 25,** climb heading 250° to 1800 before turning left.
NOTE: **Rwy 7,** trees beginning 783' from DER, 129' right of centerline, up to 53' AGL/1348' MSL. Trees beginning 849' from DER, 348' left of centerline, up to 74' AGL/1378' MSL. Poles beginning 1221' from DER, 596' left of centerline, up to 30' AGL/1336' MSL. Poles beginning 1228' from DER, 366' right of centerline, up to 38' AGL/1333' MSL. Train and tracks 1386' from DER, 819' left of centerline, 23' AGL/1335' MSL. **Rwy 25,** bush 14' from DER, 275' right of centerline, 10' AGL/1317' MSL. Vehicle and road 660' from DER, 623' left of centerline, 15' AGL/1327' MSL.

CARO, MI
TUSCOLA AREA (CFS)
AMDT 1 08325 (FAA)
TAKE-OFF MINIMUMS: **Rwys 12, 30,** NA-Environmental.
NOTE: **Rwy 5,** vehicle on highway 2163' from departure end of runway, 648' left of centerline, 17' AGL/786' MSL. Trees beginning 865' from departure end of runway, 248' right of centerline, up to 100' AGL/809' MSL. **Rwy 23,** trees beginning 990' from departure end of runway, 581' right of centerline, up to 100' AGL/789' MSL.

CHARLEVOIX, MI
CHARLEVOIX MUNI (CVX)
AMDT 4 05020 (FAA)
TAKE-OFF MINIMUMS: **Rwys 4, 22,** N/A.
NOTES: **Rwy 9,** terrain beginning at departure end of runway, left and right of centerline up to 660' MSL. **Rwy 27,** terrain beginning at departure end of runway, left and right of centerline up to 693' MSL.

CHARLOTTE, MI
FITCH H. BEACH (FPK)
AMDT 2 92065 (FAA)
TAKE-OFF MINIMUMS: **Rwys 2, 14, 20, 32,** 300-1.
DEPARTURE PROCEDURE: **Rwy 20,** climb runway heading to 1500 before turning.

CHEBOYGAN, MI
CHEBOYGAN COUNTY (SLH)
AMDT 3 86156 (FAA)
TAKE-OFF MINIMUMS: **Rwys 9, 16,** 300-1.

CLARE, MI
CLARE MUNI (48D)
TAKE-OFF MINIMUMS: **Rwys 8, 13, 26, 31,** 300-1.

COLDWATER, MI

BRANCH COUNTY MEMORIAL (OEB)
AMDT 4 08101 (FAA)

TAKE-OFF MINIMUMS: **Rwys 16, 34,** NA - Environmental.

NOTE: **Rwy 4,** vehicles on road and trees beginning 5' from departure end of runway, 92' right of centerline, up to 100' AGL/1059' MSL. Vehicles on road and trees beginning 347' from departure end of runway, 317' left of centerline, up to 100' AGL/1,059' MSL. **Rwy 7,** trees beginning 1246' from departure end of runway, 430' left of centerline, up to 100' AGL/1059' MSL. Vehicles on road and trees beginning 154' from departure end of runway, 315' right of centerline, up to 100' AGL/1039' MSL. Pole 336' from departure end of runway, 274' right of centerline, 18' AGL/977' MSL. **Rwy 22,** trains on railroad and trees beginning 769' from departure end of runway, 986' left to 945' right of centerline, up to 100' AGL/1099' MSL. **Rwy 25,** vehicles on road and trees beginning 1171' from departure end of runway, 394' left of centerline, up to 100' AGL/1,059' MSL. Trees beginning 732' from departure end of runway, 95' right of centerline, up to 100' AGL/1034' MSL.

DAVISON, MI

ATHELONE WILLIAMS MEMORIAL (6G0)
AMDT 2 97338 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26,** 300-1.

DETROIT, MI

COLEMAN A. YOUNG MUNI (DET)
AMDT 6 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 25,** 300-2 or std. w/ min. climb of 211' per NM to 1400, or alternatively, w/ standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1500' prior to departure end of runway.

DEPARTURE PROCEDURE: **Rwy 33,** climb heading 328° to 1800 before turning.

NOTE: **Rwy 7,** multiple trees beginning 232' from departure end of runway, 20' left of centerline, up to 60' AGL/687' MSL. Multiple trees beginning 283' from departure end of runway, 44' right of centerline, up to 56' AGL/680' MSL. Stack 533' from departure end of runway, 66' right of centerline, 50' AGL/671' MSL. Obstruction light on stack on building 566' from departure end of runway, 18' right of centerline, 50' AGL/671' MSL. Obstruction light on floodlight 622' from departure end of runway, 104' left of centerline, 41' AGL/668' MSL. Light standard 149' from departure end of runway, 138' left of centerline, 37' AGL/654' MSL. Light standard 227' from departure end of runway, 105' right of centerline, 33' AGL/654' MSL. Antenna on building 936' from departure end of runway, 84' right of centerline, 43' AGL/670' MSL. Obstruction light floodlight 909' from departure end of runway, 96' right of centerline, 41' AGL/668' MSL. Pole 466' from departure end of runway, 198' right of centerline, 30' AGL/654' MSL. Obstruction light on pole 132' from departure end of runway, on centerline, 16' AGL/637' MSL. **Rwy 15,** multiple trees beginning 589' from departure end of runway, 221' left of centerline, up to 69' AGL/683' MSL. Multiple trees beginning 299' from departure end of runway, 289' right of centerline, up to 52' AGL/679' MSL. Antenna on airport beacon 662' from departure end of runway, 667' left of centerline, 81' AGL/695' MSL. Pipe on obstruction light building 783' from departure end of runway, 597' left of centerline, 62' AGL/676' MSL. Obstruction light on building 1473' from departure end of runway, 556' right of centerline, 68' AGL/692' MSL. Tower 3376' from departure end of runway, 1118' right of centerline, 103' AGL/723' MSL. Antenna on building 803' from departure end of runway, 522' right of centerline, 35' AGL/656' MSL. Building 3749' from departure end of runway, 569' left of centerline, 114' AGL/723' MSL. Floodlight on building 1611' from departure end of runway, 657' left of centerline, 53' AGL/667' MSL. Rod on obstruction light building 450' from departure end of runway, 317' left of centerline, 20' AGL/637' MSL. **Rwy 25,** tower 2828' from departure end of runway, 1225' left of centerline, 141' AGL/770' MSL. Multiple trees beginning 909' from departure end of runway, 133' left of centerline, up to 76' AGL/703' MSL. Multiple trees beginning 334' from departure end of runway, 132' right of centerline, 58' AGL/685' MSL. Obstruction light on building 48' from departure end of runway, 240' left of centerline, 41' AGL/662' MSL. Railroad 1' from departure end of runway, 126' left of centerline, 29' AGL/650' MSL. Obstruction light on stack 454' from departure end of runway, 45' left of centerline, 35' AGL/659' MSL. Railroad 190' from departure end of runway, 40' left of centerline, 29' AGL/650' MSL. Obstruction light stack on building 949' from departure end of runway, 44' left of centerline, 41' AGL/668' MSL. Stack 958' from departure end of runway, 12' left of centerline, 41' AGL/668' MSL. Light standard 701' from departure end of runway, 145' right of centerline, 26' AGL/653' MSL. Stack 9474' from departure end of runway, 2415' left of centerline, 241' AGL/872' MSL.

COLEMAN A. YOUNG MUNI (CON'T)

Rwy 33, multiple trees beginning 113' from departure end of runway, 118' left of centerline, up to 73' AGL/694' MSL. Multiple trees beginning 572' from departure end of runway, 84' right of centerline, up to 92' AGL/709' MSL. Flag pole 963' from departure end of runway, 379' left of centerline, 28' AGL/658' MSL.

DETROIT METROPOLITAN/WAYNE COUNTY (DTW)
ORIG 06159 (FAA)

NOTE: **Rwy 3R,** headwall 399' from departure end of runway, 566' right of centerline, 17' AGL/647' MSL. **Rwy 4L,** multiple transmission towers 1516' from departure end of runway, 827' left of centerline, up to 60' AGL/690' MSL, multiple antennas 2751' from departue end of runway, 762' right of centerline, up to 84' AGL/714' MSL. **Rwy 4R,** antenna on building 3348' from departure end of runway, 1301' left of centerline, 100' AGL/736' MSL. **Rwy 9L,** multiple trees 968' to 2519' from departure end of runway, 462' left of centerline and 1173' right of centerline, up to 85' AGL/715' MSL. **Rwy 9R,** tree 1837' from departure end of runway, 947' right of centerline, 50' AGL/686' MSL. **Rwy 21L,** multiple trees 1079' to 3910' from departure end of runway, 586' left of centerline and 1188' right of centerline, up t o100' AGL/733' MSL. **Rwy 22L,** multiple trees 794' to 3694' from departure end of runway, 611' right of centerline and 1381' left of centerline, up t o110' AGL/740' MSL. **Rwy 27R,** rod on ASR 4461' from departure end of runway, 464' left of centelrine, 106' AGL/756' MSL.

WILLOW RUN (YIP)
AMDT 9 07354 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27R,** 200-1½ or std. w/ min. climb of 206' per NM to 1000.

NOTE: **Rwy 5L,** multiple trees beginning 1438' to 2887' from departure end of runway, from 119' to 438' left of centerline, up to 79' AGL/785' MSL. **Rwy 5R,** multiple trees beginning 1877' to 2472' from departure end of runway, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL. **Rwy 9R,** multiple trees beginning 827' to 2598' from departure end of runway, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL. **Rwy 23L,** tree 1304' from departure end of runway, 438' right of centerline, 42' AGL/757' MSL. Tree 2457' from departure end of runway, 720' left of centerline, 66' AGL/781' MSL. **Rwy 23R,** multiple trees and road with vehicle beginning 587' to 1333' from departure end of runway, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL. **Rwy 27L,** multiple trees and poles beginning 1273' to 2024' from departure end of runway, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL. **Rwy 27R,** railroad and lights beginning 564' to 1565' from departure end of runway, from 4' to 333' left of centerline, up to 54' AGL/770' MSL. Tree and lights beginning 102' to 1257' from departure end of runway, from 10' to 485' right of centerline, up to 55' AGL/771' MSL. Tower 7161' from departure end of runway, 502' left of centerline, 162' AGL/900' MSL. **Rwy 32,** multiple trees and poles beginning 701' to 1884' from departure end of runway, from 78' to 750' left of centerline, up to 84' AGL/798' MSL. Multiple trees 1157' to 1893' from departure end of runway, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

DETROIT/GROSSE ILE, MI

GROSSE ILE MUNI (ONZ)
AMDT 4 97198 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 17, 22,** 300-1.
Rwy 35, 800-2 or 300-1 with a min. climb of 210' per NM to 1400.

DOWAGIAC, MI

DOWAGIAC MUNI (C91)
AMDT 4 80150 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 9, 22, 27,** 400-1.
DEPARTURE PROCEDURE: **Rwys 4, 9, 22,** climb runway heading to 1500 before turning.

DRUMMOND ISLAND, MI

DRUMMOND ISLAND (DRM)
ORIG 82301 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26, 18, 36,** 300-1.

EAST TAWAS, MI

IOSCO COUNTY (6D9)
ORIG 81106 (FAA)

DEPARTURE PROCEDURE: **Rwys 8,26,** climb runway heading to 1100 before turning.

EATON RAPIDS, MI

SKYWAY ESTATES (60G)
ORIG 90235 (FAA)

TAKE-OFF MINIMUMS: **Rwys 8, 26,** 300-1.
DEPARTURE PROCEDURE: **Rwys 8, 26,** climb runway heading to 2500 before turning.

ESCANABA, MI

DELTA COUNTY (ESC)
ORIG 09127 (FAA)

TAKE-OFF MINIMUMS: **Rwy 36,** 400-2¼ or std. w/ min. climb of 261' per NM to 1100.

NOTE: **Rwy 9,** vehicles on roadway at DER, 272' right of centerline, 15' AGL/607' MSL. Trees beginning 1013' from DER, 444' left of centerline, up to 100' AGL/690' MSL. Trees beginning 1185' from DER, 55' right of centerline, up to 100' AGL/690' MSL. **Rwy 18,** buildings 1' from DER, 480' right of centerline, up to 26' AGL/616' MSL. Fences 139' from DER, 402' right of centerline, up to 9' AGL/599' MSL. Pole 255' from DER, 563' right of centerline, 20' AGL/618' MSL. Trees beginning 329' from DER, 18' left of centerline, up to 100' AGL/664' MSL. Trees beginning 375' from DER, 19' right of centerline, up to 100' AGL/673' MSL. **Rwy 36,** tower 1.87 NM from DER, 2362' left of centerline, 293' AGL/915' MSL. Vehicles on roadway beginning 41' from DER, 40' right of centerline, 15' AGL/621' MSL. Trees beginning 349' from DER, 555' right of centerline, up to 100' AGL/697' MSL. Trees beginning 366' from DER, 2' left of centerline, up to 100' AGL/700' MSL.

FLINT, MI

BISHOP INTL (FNT)
AMDT 5 02052 (FAA)

NOTE: **Rwy 18,** trees 1200' from departure end of runway, 500' right of centerline, 65' AGL/863' MSL.

FRANKFORT, MI
FRANKFORT DOW MEMORIAL FIELD (FKS)
AMDT 2 97282 (FAA)
TAKE-OFF MINIMUMS: **Rwy 15,** 500-2 or std. with a min. climb of 360' per NM to 1300. **Rwy 33,** 300-2.
DEPARTURE PROCEDURE: **Rwy 33,** climb runway heading to 1500 before turning.

FREMONT, MI
FREMONT MUNI (FFX)
ORIG 09351 (FAA)
TAKE-OFF MINIMUMS: **Rwy 27,** 300-1½ or std. w/ a min climb of 211' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, take-off must occur no later than 1400' prior to DER.
NOTE: **Rwy 9,** trees beginning 947' from DER, on centerline, up to 100' AGL/866' MSL. **Rwy 18,** trees beginning 1055' from DER, 763' right of centerilne, up to 100' AGL/859' MSL. Pole 1140' from DER, 617' right of centerline, 27' AGL/784' MSL. Trees beginning 2276' from DER, 1029' left of centerline, up to 100' AGL/847' MSL. **Rwy 27,** trees beginning 816' from DER, 635' right of centerline, up to 100' AGL/876' MSL. Trees beginning 2640' from DER on centerline, up to 100' AGL/876' MSL. Trees beginning 1.18 NM from DER, 1830' right of centerline, up to 100' AGL/960' MSL. **Rwy 36,** terrain 81' from DER, 484' left of centerline, 774' MSL. Transmission poles beginning 1157' from DER, 728' left to 497' right of centerline, up to 40' AGL/817' MSL. Catenary 1564' from DER, 41' right of centerline, 37' AGL/814' MSL. Trees beginning 1584' from DER, 577' left to 412' right of centerline, up to 67' AGL/844' MSL.

GAYLORD, MI
GAYLORD RGNL (GLR)
ORIG 09127 (FAA)
NOTE: **Rwy 9,** trees beginning 917' from DER, 318' right of centerline, up to 57' AGL/1387' MSL. Trees beginning 918' from DER, 357' left of centerline, up to 79' AGL/1407' MSL. Ceilometer 166' from DER, 258' left of centerline, 4' AGL/1334' MSL. **Rwy 18,** powerline pylon 2125' from DER, 917' right of centerline, 79' AGL/1398' MSL. Bushes beginning 18' from DER, 255' left of centerline, up to 21' AGL/1338' MSL. **Rwy 27,** trees beginning 2870' from DER, 345' right of centerline, up to 83' AGL/1403' MSL. Tree 2906' from DER, 234' left of centerline, 75' AGL/1395' MSL. **Rwy 36,** trees and bush beginning 79' from DER, 191' left of centerline, up to 54' AGL/1374' MSL.

GLADWIN, MI
CHARLES ZETTEL MEMORIAL (GDW)
AMDT 2 97086 (FAA)
TAKE-OFF MINIMUMS: **Rwy 27,** 600-2.
Rwy 33, 500-2.

GRAND HAVEN, MI
GRAND HAVEN MEMORIAL AIRPARK (3GM)
AMDT 4 83272 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18, 36,** 300-1.
DEPARTURE PROCEDURE: **Rwys 9, 18, 27, 36,** climb runway heading to 1100 before turning.

GRAND LEDGE, MI
ABRAMS MUNI (4D0)
AMDT 2 93147 (FAA)
TAKE-OFF MINIMUMS: **Rwys 18, 27, 36,** 300-1 or std. with a min. climb of 300' per NM to 1200.

GRAND RAPIDS, MI
GERALD R. FORD INTL (GRR)
AMDT 2 09183(FAA)
NOTE: **Rwy 8L,** vehicle on road 20' from DER, 156' left of centerline, 15' AGL/794' MSL. Trees beginning 1419' from DER, 740' left of centerline, up to 100' AGL/859' MSL. **Rwy 17,** trees beginning 1382' from DER, 134' left of centerline, up to 100' AGL/929' MSL. Trees beginning 1389' from DER, 819' right of centerline, up to 100' AGL/899' MSL. **Rwy 26R,** terrain beginning 102' from DER, 381' right of centerline, up to 808' MSL. **Rwy 35,** vehicle on road 742' from DER, 675' left of centerline, up to 15' AGL/804' MSL. Trees beginning 2002' from DER, 715' left of centerline, up to 100' AGL/869' MSL. Trees beginning 1339' from DER, 7' right of centerline, up to 100' AGL/879' MSL.

GRAYLING, MI
GRAYLING AAF (GOV)
AMDT 2 97198 (FAA)
TAKE-OFF MINIMUMS: **Rwys 5,14, 23, 32,** 300-1.

GREENVILLE, MI
GREENVILLE MUNI (6D6)
AMDT 2 02164 (FAA)
TAKE-OFF MINIMUMS: **Rwy19,** 300-1.

HANCOCK, MI
HOUGHTON COUNTY MEMORIAL (CMX)
AMDT 2 89208 (FAA)
TAKE-OFF MINIMUMS: **Rwy 25,** 300-1.
DEPARTURE PROCEDURE: **Rwys 25, 31,** climb runway heading to 1500 before turning.

HARBOR SPRINGS, MI
HARBOR SPRINGS (MGN)
AMDT 2 08073 (FAA)
TAKE-OFF MINIMUMS: **Rwy 28,** 300-1½ or std. w/ min. climb of 295' per NM to 2000.
DEPARTURE PROCEDURE: **Rwy 10,** Climb heading 101° to 1400 before proceeding on course. **Rwy 28,** Climb heading 281° to 2000 before turning right.
NOTE: **Rwy 10,** trees beginning abeam departure end of runway, 350' right of centerline, up to 100' AGL/788' MSL. Vehicle and road beginning 188' from departure end of runway, left to right of centerline, up to 15' AGL/736' MSL. Trees beginning 1671' from departure end of runway, 720' left of centerline, up to 100' AGL/821' MSL. **Rwy 28,** trees beginning abeam departure end of runway, 398' left of centerline, up to 100' AGL/723' MSL. Trees beginning abeam departure end of runway, 313' right of centerline, up to 100' AGL/936' MSL. Vehicle and road beginning abeam departure end of runway, left to right of centerline, up to 15' AGL/720' MSL.

HASTINGS, MI
HASTINGS (9D9)
ADMT 4 95117 (FAA)
TAKE-OFF MINIMUMS: **Rwys 9,12,18,27,** 300-1.

HILLSDALE, MI

HILLSDALE MUNI (JYM)
ORIG 97310 (FAA)

TAKE-OFF MINIMUMS: **Rwy 10,** 300-1.

HOLLAND, MI

TULIP CITY (BIV)
AMDT 1 09183 (FAA)

NOTE: **Rwy 8,** vehicles on road beginning 48' from DER, 500' right of centerline, up to 15' AGL/694' MSL, Trees beginning 1828' from DER, 829' left of centerline, up to 72' AGL/741' MSL. **Rwy 26,** vehicles on road beginning 86' from DER, 517' left of centerline, up to 15' AGL/714' MSL, pole 805' from DER, 475' left of centerline, 35' AGL/734' MSL, trees 1056' from DER, 468' left of centerline, up to 41' AGL/740' MSL.

HOUGHTON LAKE, MI

ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)
AMDT 1 07298 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9,** 200-1¼, or std. w/ min. climb of 237' per NM to 1400. **Rwys 18, 36,** NA-ATC.

DEPARTURE PROCEDURE: **Rwy 27,** climb heading 274° to 2600 before turning south.

NOTE: **Rwy 9,** multiple trees beginning 2330' from departure end of runway, on centerline, up to 71' AGL/1216' MSL. Multiple trees beginning 5927' from departure end of runway 275' left of centerline, up to 100' AGL/1299' MSL. Terrain beginning 31' from departure end of runway, 215' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 43' from departure end of runway, 84' left of centerline, up to 0' AGL/1162' MSL. **Rwy 27,** multiple trees beginning 791' from departure end of runway, on centerline, up to 90' AGL/1239' MSL. Fence and road beginning 323' from departure end of runway, on centerline, up to 15' AGL/1164' MSL. Terrain beginning 100' from departure end of runway, 171' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 112' from departure end of runway, 128' left of centerline, up to 0' AGL/1162' MSL.

HOWELL, MI

LIVINGSTON COUNTY SPENCER J. HARDY (OZW)
AMDT3 06215 (FAA)

NOTE: **Rwy 31,** multiple trees and light pole beginning 138' from departure end of runway, 334' right of centerline, up to 88' AGL/1030' MSL. Multiple trees beginning 914' from departure end of runway, 483' left of centerline, up to 83' AGL/1012' MSL. **Rwy 13,** tree 1776' from departure end of runway, 696' right of centerline, 70' AGL/1009' MSL.

IONIA, MI

IONIA COUNTY (Y70)
ORIG 83230 (FAA)

DEPARTURE PROCEDURE: **Rwys 9, 18, 27, 36,** climb runway heading to 1400 before turning.

IRON MOUNTAIN-KINGSFORD, MI

FORD (IMT)
AMDT 5 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 13,** 300-1 or std. w/ min. climb of 590' per NM to 1400. **Rwy 31,** 300-1¼ or std. w/ min. climb of 260' per NM to 1400.

DEPARTURE PROCEDURE: **Rwy 1,** climb heading 010° to 1700 before turning right. **Rwy 13,** climb heading 134° to 1900 before turning left.

NOTE: **Rwy 1,** trees and bushes beginning 526' from DER, 292' right of centerline, up to 79' AGL/1259' MSL. Antenna, trees and bushes beginning 378' from DER, 192' left of centerline, up to 76' AGL/1276' MSL. **Rwy 13,** tree 1276' from DER, 312' right of centerline, 88' AGL/1188' MSL. Trees and poles beginning 547' from DER, 100' left of centerline, up to 86' AGL/1306' MSL. **Rwy 19,** trees beginning 992' from DER, 245' right of centerline, up to 56' AGL/1192' MSL. Trees beginning 1229' from DER, 376' left of centerline, up to 48' AGL/1183' MSL. **Rwy 31,** trees 1711' from DER, 113' right of centerline, 66' AGL/1186' MSL. Bush 165' from DER, 161' right of centerline, 11' AGL/1131' MSL. Trees beginning 66' from DER, 182' left of centerline, up to 95' AGL/1315' MSL.

IRONWOOD, MI

GOGEBIC-IRON COUNTY (IWD)
AMDT 6 09127 (FAA)

DEPARTURE PROCEDURE: **Rwy 9,** climb heading 090° to 2300 before turning right. **Rwy 27,** climb heading 270° to 1700 before turning left.

NOTE: **Rwy 9,** trees beginning 61' from DER, 544' left of centerline, up to 31' AGL/1244' MSL. Tree 1853' from DER, 972' left of centerline, 100' AGL/1346' MSL. **Rwy 27,** vehicle on road 287' from DER, 2' right of centerline, 15' AGL/1237' MSL. Tree 1946' from DER, 952' right of centerline, 69' AGL/1283' MSL. Tree 2817' from DER, 588' left of centerline, 74' AGL/1304' MSL.

JACKSON, MI

JACKSON COUNTY-REYNOLDS FIELD (JXN)
AMDT 5 09295 (FAA)

NOTE: **Rwy 6,** antenna 3131' from DER, 1331' left of centerline, 75' AGL/1075' MSL. **Rwy 14,** tank 2617' from DER, 373' left of centerline, 107' AGL/1107' MSL. Antenna 3102' from DER, 597' left of centerline, 111' AGL/1111' MSL. Trees beginning 1137' from DER, 8' left of centerline, up to 84' AGL/1083' MSL. Trees and poles beginning 518' from DER, 13' right of centerline, up to 114' AGL/1113' MSL. Road plus vehicle 541' from DER, 245' right of centerline, 15' AGL/1015' MSL. **Rwy 24,** trees and poles beginning 367' from DER, 48' left of centerline, up to 80' AGL/1079' MSL. Buildings beginning 125' from DER, 372' left of centerline, 23' AGL/1022' MSL. Fence beginning 88' from DER, 247' right of centerline, 10' AGL/1002' MSL. Road plus vehicle 306' from DER, 3' right of centerline, 15' AGL/1007' MSL. Trees beginning 1231' from DER, 232' right of centerline, up to 62' AGL/1051' MSL. Localizer obstruction light 140' from DER, on centerline, 10' AGL/999' MSL. **Rwy 32,** trees and poles beginning 169' from DER, 69' left of centerline, up to 104' AGL/1093' MSL. Fence beginning 475' from DER, 148' left of centerline, up to 10' AGL/985' MSL. Trees beginning 94' from DER, 5' right of centerline, up to 103' AGL/1092' MSL. Fence beginning 278' from DER, 367' right of centerline, up to 10' AGL/999' MSL.

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK INTL (AZO)
AMDT 9 07242 (FAA)

NOTE: **Rwy 5,** light pole 906' from departure end of runway, 511' left of centerline, 25' AGL/879' MSL. Multiple trees beginning 1433' from departure end of runway, 90' left of centerline, up to 65' AGL/914' MSL. Multiple towers beginning 2399' from departure end of runway, 331' right of centerline, up to 119' AGL/970' MSL. Multiple trees beginning 156' from departure end of runway, 163' right of centerline, up to 78' AGL/917' MSL. **Rwy 9,** multiple trees beginning 588' from departure end of runway, on centerline, up to 104' AGL/958' MSL. Antenna 2187' from departure end of runway, 222' right of centerline, 69' AGL/928' MSL. Tree 677' from departure end of runway, 214' right of centerline, 45' AGL/899' MSL. **Rwy 17,** railroad 587' from departure end of runway, 613' left of centerline, 17' AGL/885' MSL. Tree 691' from departure end of runway, 583' right of centerline, 57' AGL/894' MSL. **Rwy 23,** multiple trees beginning 937' from departure end of runway, 50' left of centerline, up to 72' AGL/956' MSL. Multiple poles and hangar beginning 22' from departure end of runway, 331' right of centerline, up to 24' AGL/905' MSL. Multiple trees beginning 943' from departure end of runway, 144' right of centerline, up to 107' AGL/986' MSL. **Rwy 27,** road 543' from departure end of runway, on centerline, 15' AGL/890' MSL. Multiple trees beginning 414' from departure end of runway, 292' left of centerline, up to 23' AGL/972' MSL. Multiple light poles and towers beginning 521' from departure end of runway, 18' right of centerline, up to 180' AGL/1015' MSL. Multiple trees beginning 1012' from departure end of runway, 23' right of centerline, up to 75' AGL/969' MSL. **Rwy 35,** multiple trees beginning 2319' from departure end of runway, 163' left of centerline, up to 75' AGL/934' MSL. Multiple trees beginning 1961' from departure end of runway, 753' right of centerline, up to 77' AGL/936' MSL.

LAKEVIEW, MI

LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)
ORIG 98281 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27,** 300-1 or std. with a min. climb of 400' per NM to 1200.

NOTE: **Rwy 9,** 1018' tree 50' from departure end of runway, 490' right of centerline.

LAMBERTVILLE, MI

TOLEDO SUBURBAN (DUH)
AMDT 1 80360 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27,** 300-1.

LANSING, MI

CAPITAL CITY (LAN)
AMDT 13 93147 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6, 10L, 24, 28R,** 300-1.

DEPARTURE PROCEDURE: **Rwys 10L,10R,** climb runway heading to 2000 before turning south.

Rwys 6, 24, 28L, 28R, climb runway heading to 1500 before turning southeast.

LAPEER, MI

DUPONT-LAPEER (D95)
AMDT3 86156 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27,** 300-1.

LINDEN, MI

PRICE'S (9G2)
AMDT 4 98085 (FAA)

TAKE-OFF MINIMUMS: **Rwy 36,** NA.

LUDINGTON, MI

MASON COUNTY (LDM)
AMDT 6 92233 (FAA)

TAKE-OFF MINIMUMS: **Rwys 1, 19, 26,** 300-1.

MACKINAC ISLAND, MI

MACKINAC ISLAND (MCD)
AMDT 1 80164 (FAA)

DEPARTURE PROCEDURE: **Rwy 8,** climb runway heading to 1100 before turning right.

MASON, MI

MASON JEWETT FIELD (TEW)
AMDT 2 93035 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9,** 300-1.

MENOMINEE, MI

MENOMINEE-MARINETTE TWIN COUNTY (MNM)
AMDT 3 09239 (FAA)

NOTE: **Rwy 3,** trees and bush beginning 196' from DER, 340' left of centerline, up to 100' AGL/719' MSL. Multiple trees beginning 1568' from DER, 702' right of centerline, up to 100' AGL/759' MSL. **Rwy 14,** multiple trees, poles, and building beginning 451' from DER, 85' left of centerline, up to 135' AGL/735' MSL. Multiple trees and pole beginning 651' from DER, 171' right of centerline,up to 100' AGL/704' MSL. **Rwy 21,** multiple trees beginning 932' from DER, 469' left of centerline, up to 77' AGL/677' MSL. Multiple trees beginning 1808' from DER, 701' right of centerline, up to 65' AGL/685' MSL. **Rwy 32,** multiple trees beginning 64' from DER, 71' left of centerline, up to 100' AGL/739' MSL. Multiple trees beginning 875' from DER, 15' right of centerline, up to 100' AGL/759' MSL.

MIDLAND, MI

JACK BARSTOW (IKW)
ORIG 09183 (FAA)

NOTE: **Rwy 6,** trees beginning 56' from DER, 493' right of centerline, up to 25' AGL/655' MSL. Trees beginning 920' from DER, 47' left of centerline, up to 20' AGL/660' MSL. Trees beginning 1144' from DER, from right to left of centerline, up to 100' AGL/754' MSL. Pole 1495' from DER, 331' right of centerline, 37' AGL/672' MSL. **Rwy 18,** trees beginning 339' from DER, 279' left of centerline, up to 100' AGL/729' MSL. Trees beginning 358' from DER, 306' right of centerline, up to 100' AGL/724' MSL. **Rwy 24,** vehicles on road beginning 225' from DER, from right to left of centerline, up to 15' AGL/634' MSL. Trees beginning 510' from DER, 103' right of centerline, up to 100' AGL/710' MSL. Trees beginning 787' from DER, 152' left of centerline, up to 100' AGL/709' MSL. **Rwy 36,** trees beginning 105' from DER, 200' right of centerline, up to 100' AGL/744' MSL. Trees beginning 147' from DER, 242' left of centerline, up to 100' AGL/729' MSL.

MONROE, MI
CUSTER (TTF)
AMDT 6 08213
NOTE: **Rwy 21,** Trees and light poles beginning 81' from departure end of runway, 9' right of centerline, up to 122' AGL/736' MSL. Trees and light poles beginning 243' from departure end of runway, 218' left of centerline, up to 98' AGL/707' MSL. Road and vehicle beginning 1954' from departure end of runway, on centerline, 15' AGL/626' MSL.

MOUNT PLEASANT, MI
MOUNT PLEASANT MUNI (MOP)
AMDT 5 09239 (FAA)
TAKE-OFF MINIMUMS: **Rwys 5, 23,** NA-Environmental.
NOTE: **Rwy 9,** trees beginning 420' from DER, 512' right of centerline, up to 86' AGL/845' MSL. Trees beginning 420' from DER, 266' left of centerline, up to 23' AGL/836' MSL. **Rwy 27,** trees beginning 1115' from DER, 39' right of centerline, up to 99' AGL/858' MSL. Trees beginning 1025' from DER, 3' left of centerline, up to 108' AGL/867' MSL.

MUSKEGON, MI
MUSKEGON COUNTY (MKG)
AMDT 10 09015 (FAA)
NOTE: **Rwy 6,** tree 1700' from departure end of runway, 600' right of centerline, 25' AGL/672' MSL. Multiple trees beginning 1980' from departure end of runway, 300' left of centerline, up to 75' AGL/709' MSL. **Rwy 14,** pole 1040' from departure end of runway, 700' left of centerline, 25' AGL/655' MSL. Multiple poles beginning 1500' from departure end of runway, 880' right of centerline, up to 50' AGL/677' MSL. Tree 1900' from departure end of runway, 940' left of centerline, 79' AGL/709' MSL. **Rwy 24,** bush 124' from departure end of runway, 480' left of centerline, 19' AGL/630' MSL. Tree 500' from departure end of runway, 300' right of centerline, 42' AGL/649' MSL. Tree 1210' from departure end of runway, 450' left of centerline, 42' AGL/653' MSL. Antenna 1220' from departure end of runway, 500' right of centerline, 43' AGL/654' MSL. Multiple trees beginning 2200' from departure end of runway, 50' left of centelrine, up to 86' AGL/697' MSL. **Rwy 32,** tree 1040' from departure end of runway, 740' right of centerline, 65' AGL/659' MSL. Tree 1190' from departure end of runway, 500' left of centerline, 65' AGL/663' MSL. Tree 1270' from departure end of runway, 800' left of centerline, 89' AGL/690' MSL.

NEW HUDSON, MI
OAKLAND SOUTHWEST (Y47)
AMDT 2 88350 (FAA)
TAKE-OFF MINIMUMS: **Rwys 7, 25,** 300-1.

NILES, MI
JERRY TYLER MEMORIAL (3TR)
AMDT 5 85353 (FAA)
TAKE-OFF MINIMUMS: **Rwys 3, 14, 21, 32,** 300-1.
DEPARTURE PROCEDURE: **Rwys 3, 14,** climb runway heading to 1400 before turning. **Rwy 21,** left turn climb heading 180° to 1400 before turning. **Rwy 32,** right turn climb heading 360° to 1400 before turning.

ONTONAGON, MI
ONTONAGON COUNTY-SCHUSTER FIELD (OGM)
AMDT 1 86072 (FAA)
TAKE-OFF MINIMUMS: **Rwys 17, 35,** 300-1.

OSCODA, MI
OSCODA-WURTHSMITH (OSC)
ORIG 08157 (FAA)
NOTE: **Rwy 6,** Trees beginning 3096' from departure end of runway, 967' left of centerline up to 100' AGL/719' MSL. **Rwy 24,** Trees beginning 2192' from departure end of runway, 578' right of centerline up to 100' AGL/739' MSL. Trees beginning 1415' from departure end of runway, 559' left of centerline, up to 100' AGL/739' MSL.

OWOSSO, MI
OWOSSO COMMUNITY (RNP)
AMDT 4 08213 (FAA)
TAKE-OFF MINIMUMS: **Rwys 6, 18, 24, 36,** NA - Environmental.
NOTE: **Rwy 10,** bush 187' from departure end of runway, 158' right of centerline, 3' AGL/742' MSL. Trees beginning 1136' from departure end of runway, 630' left of centerline, up to 75' AGL/814' MSL. Trees and pole beginning 1111' from departure end of runway, 596' right of centerline, up to 90' AGL/829' MSL. Powerline with towers beginning 2029' from departure end of runway, left and right of centerline, 90' AGL/829' MSL. **Rwy 28,** bush 212' from departure end of runway, 436' right of centerline, 11' AGL/741' MSL. Vent, trees, and a building beginning 266' from departure end of runway, 46' left of centerline, up to 100' AGL/836' MSL. Trees and a pole beginning 1184' from departure end of runway, 244' right of centerline, up to 60' AGL/815' MSL.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)
AMDT 4 09183 (FAA)

TAKE-OFF MINIMUMS: **Rwy 23,** std. w/ a min. climb of 260' per NM to 1800, or 1000-2½ for climb in visual conditions. **Rwy 32,** std. w/ a min. climb of 290' per NM to 1100, or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 23, 32,** for climb in visual conditions: cross Pellston Rgnl airport of Emmet County at or above 1600.

NOTE: **Rwy 5,** vehicle on road 411' from DER, 588' left of centerline, 15' AGL/738' MSL. Trees beginning 1070' from DER, 12' left of centerline, up to 100' AGL/838' MSL. Railroad 810' from DER, 672' right of centerline, 23' AGL/744' MSL. Trees beginning 1001' from DER, 288' right of centerline, up to 100' AGL/821' MSL.

Rwy 14, trees beginning 1290' from DER, 814' left of centerline, up to 100' AGL/805' MSL. **Rwy 23,** vehicle on road 14' from DER, 463' left of centerline, 15' AGL/720' MSL. Trees beginning 476' from DER, 53' left of centerline, up to 100' AGL/805' MSL. Trees beginning 953' from DER, 240' right of centerline, up to 100' AGL/820' MSL. Tree 2.97 NM from DER, 2771' right of centerline, 100' AGL/1297' MSL. **Rwy 32,** bush 107' from DER, 309' right of centerline, 4' AGL/722' MSL. Vehicle on road 1213' from DER, 809' right of centerline, 15' AGL/752' MSL. Terrain 2127' from DER, 715' right of centerline, 775' MSL. Trees beginning 4336' from DER, 315' right of centerline, up to 100' AGL/872' MSL. Trees beginning 1932' from DER, 20' left of centerline, up to 100' AGL/996' MSL.

PLYMOUTH, MI

CANTON-PLYMOUTH-METTETAL (1D2)

TAKE-OFF MINIMUMS: **Rwys 18, 36,** 300-1.

PONTIAC, MI

OAKLAND COUNTY INTL (PTK)
AMDT 5 09295 (FAA)

TAKE-OFF MINIMUMS: **Rwys 17, 35,** NA-Environmental.

NOTE: **Rwy 9L,** hangars beginning 203' from DER, 511' left of centerline, up to 30' AGL/1000' MSL. **Rwy 9R,** multiple trees beginning 1382' from DER, 647' left of centerline, up to 41' AGL/1011' MSL. Antenna on hangar 870' from DER, 732' right of centerline, 36' AGL/1006' MSL. **Rwy 27L,** trees 452' from DER, 331' right of centerline, 23' AGL/1002' MSL. Vehicle on road 388' from DER, 15' right of centerline, 15' AGL/992' MSL. Multiple trees beginning 449' from DER, 60' left of centerline, up to 76' AGL/1046' MSL. **Rwy 27R,** multiple trees beginning 451' from DER, 2' right of centerline, up to 62' AGL/1041' MSL. Vehicle on road 416' from DER, 24' right of centerline, 15' AGL/992' MSL. Multiple trees beginning 387' from DER, 19' left of centerline, up to 36' AGL/1015' MSL.

PORT HURON, MI

ST. CLAIR COUNTY INTL (PHN)
AMDT 5 96060 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 10, 28,** 300-1.

ROGERS CITY, MI

PRESQUE ISLE COUNTY (PZQ)
AMDT1 86268 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27,** 300-1.

ROMEO, MI

ROMEO STATE (D98)
AMDT 4 08101 (FAA)

NOTE: **Rwy 18,** Vehicle on roadway 364' from departure end of runway, on centerline, 15' AGL/744' MSL. Trees beginning 1360' from departure end of runway, 854' left of centerline, up to 100' AGL/825' MSL. **Rwy 36,** Vehicle on roadway 579' from departure end of runway, on centerline, 15' AGL/759' MSL. Trees beginning 955' from departure end of runway, left and right of centerline, up to 100' AGL/845' MSL.

SAGINAW, MI

MBS INTL (MBS)
ORIG 86240 (FAA)

DEPARTURE PROCEDURE: **Rwys 5, 23,** climb runway heading to 1100 before turning.

SAGINAW COUNTY H.W. BROWNE (HYX)
AMDT 7 86128 (FAA)

TAKE-OFF MINIMUMS: **Rwys 5, 9, 23, 27,** 400-1.

DEPARTURE PROCEDURE: **Rwy 9,** climb runway heading to 2100 before turning North. **Rwys 23, 27,** climb runway heading to 2100 before turning Northeast. **Rwy 5,** right turn climb heading 090° to 2100 before turning North.

SAULT STE MARIE, MI

CHIPPEWA COUNTY INTL (CIU)
ORIG 09295 (FAA)

NOTE: **Rwy 9,** buildings beginning 453' from DER, 519' right of centerline, up to 30' AGL/829' MSL. Building 723' from DER, 461' left of centerline, up to 30' AGL/829' MSL. Trees beginning 1838' from DER, 23' right of centerline, up to 100' AGL/899' MSL.

Rwy 16, trees beginning 3645' from DER, extending from 1018' right of centerline to 1221' left of centerline, up to 100' AGL/899' MSL. **Rwy 27,** vehicle on road, 412' from DER, 510' left of centerline, up to 15' AGL/804' MSL. Trees beginning 520' from DER, extending from 581' left of centerline to 827' right of centerline, up to 100' AGL/879' MSL.

SELFRIDGE ANGB (KMTC)

MT. CLEMENS, MI . . . . . .AMDT 1, 09015

Rwy 19*

Rwy 1, 300-1¼**

* Standard with a CG of 260'/NM to 1600.

** Or standard with CG of 280'/NM to 1000.

DEPARTURE PROCEDURE: **Rwy 19,** For climb in visual conditions: Ceiling 1300'/ Visibility 2½ SM, remain within 5.6 NM of KMTC airport, cross KMTC airport at or above 1700 before proceeding on course. Max airspeed 250 KIAS. **Rwy 1,** Standard with minimum climb of 280'/NM to 1000 or 300-1¼.

TAKE-OFF OBSTACLES: **Rwy 19:** Power poles 2274' from DER 38' right of centerline, 36' AGL/616' MSL. Trees 3310' from DER 929' right of centerline, 80' AGL/660' MSL. **Rwy 1:** Rising terrain 6' out to 237' from DER beginning 500' out to 563' left of centerline, up to 585' MSL (up to 6' above Thr). Fence from 68' out to 220' from DER beginning 341' to 523' right of centerline, 10' AGL/595' MSL. Trees starting 3043' out to 3099' from DER beginning 451' to 927' right of centerline, 80' AGL/660' MSL. Trees starting 2334' out to 3059' from DER beginning 1057' to 1105' left of centerline, 80' AGL/660' MSL. Vehicle 1560' from DER 427' left of centerline, 15' AGL/ 600' MSL. West bracket reflector 997' from DER 226' left ofcenterline, 15' AGL/592' MSL.

SOUTH HAVEN, MI

SOUTH HAVEN AREA RGNL (LWA)

AMDT 2 91234 (FAA)

TAKE-OFF MINIMUMS: **Rwys 4, 14, 32,** 300-1.

SPARTA, MI

PAUL C. MILLER-SPARTA (8D4)

TAKE-OFF MINIMUMS: **Rwys 7, 25,** 300-1.

STURGIS, MI

KIRSCH MUNI (IRS)

AMDT 2 96256 (FAA)

TAKE-OFF MINIMUMS: **Rwy 6, 24,** 300-1.

TECUMSEH, MI

MEYERS-DIVER'S (3TE)

AMDT2 96004 (FAA)

TAKE-OFF MINIMUMS: **Rwy 9,** 300-1.

TRAVERSE CITY, MI

CHERRY CAPITAL (TVC)

AMDT 9 98169 (FAA)

TAKE-OFF MINIMUMS: **Rwys 18, 36,** 300-1.
Rwy 28, 700-2 or std. with min. climb of 300' per NM to 2000.

DEPARTURE PROCEDURE: **Rwys 10, 18, 36,** climb runway heading to 2000 before proceeding on course. **Rwy 28,** climbing left turn heading 240° to 2000 before proceeding on course.

TROY, MI

OAKLAND/TROY (VLL)

AMDT 3 92289 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27,** 300-1.

DEPARTURE PROCEDURE: **Rwys 9, 27,** climb runway heading to 1200 before turning.

WEST BRANCH, MI

WEST BRANCH COMMUNITY (Y31)

AMDT 2 97086 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27,** 500-2.

ADG NDB	APP CRS	Rwy ldg	5001
278	042°	TDZE	798
		Apt Elev	798

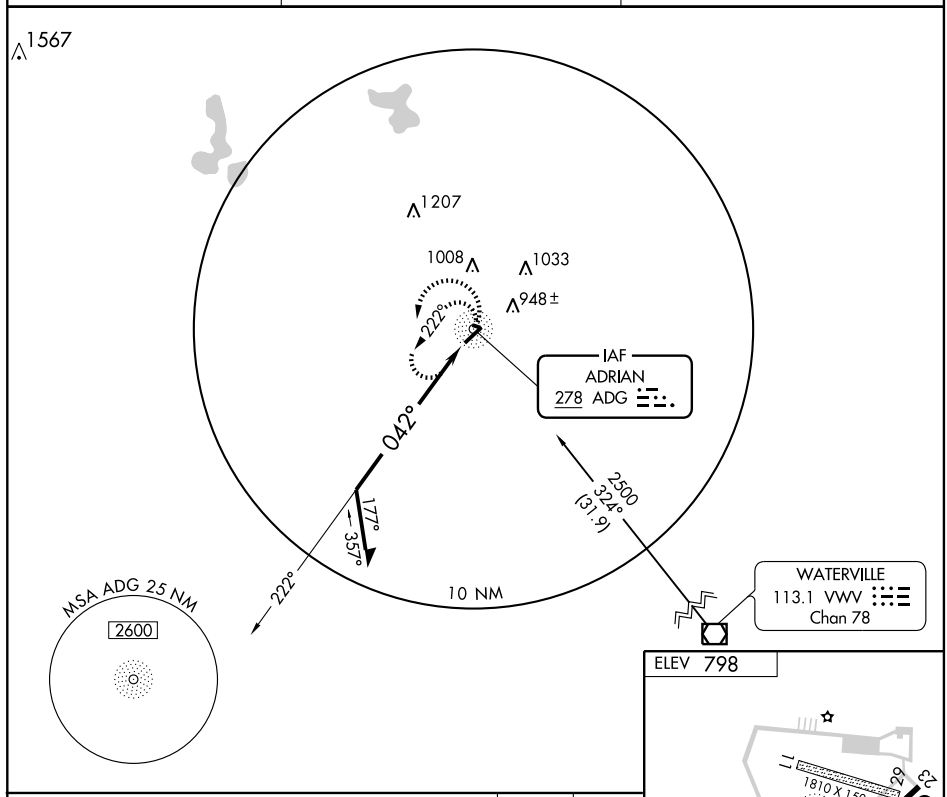
NDB RWY 5

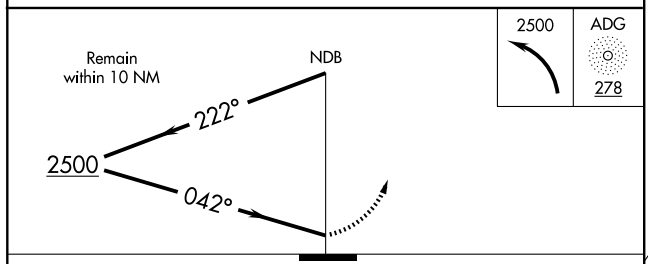
ADRIAN / LENAWEE COUNTY (ADG)

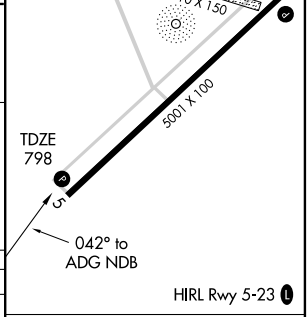
T
A NA

MISSED APPROACH: Climbing left turn to 2500 in ADG NDB holding pattern.

ASOS	TOLEDO APP CON	UNICOM
118.375	134.35 317.55	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-5	1380-1	582 (600-1)	1380-1½ 582 (600-1½)	1380-1¾ 582 (600-1¾)
CIRCLING	1380-1	582 (600-1)	1380-1½ 582 (600-1½)	1380-2 582 (600-2)

Knots	60	90	120	150	180
Min:Sec					

WAAS CH 42603 W05A	APP CRS 053°	Rwy ldg 5001 TDZE 798 Apt Elev 798

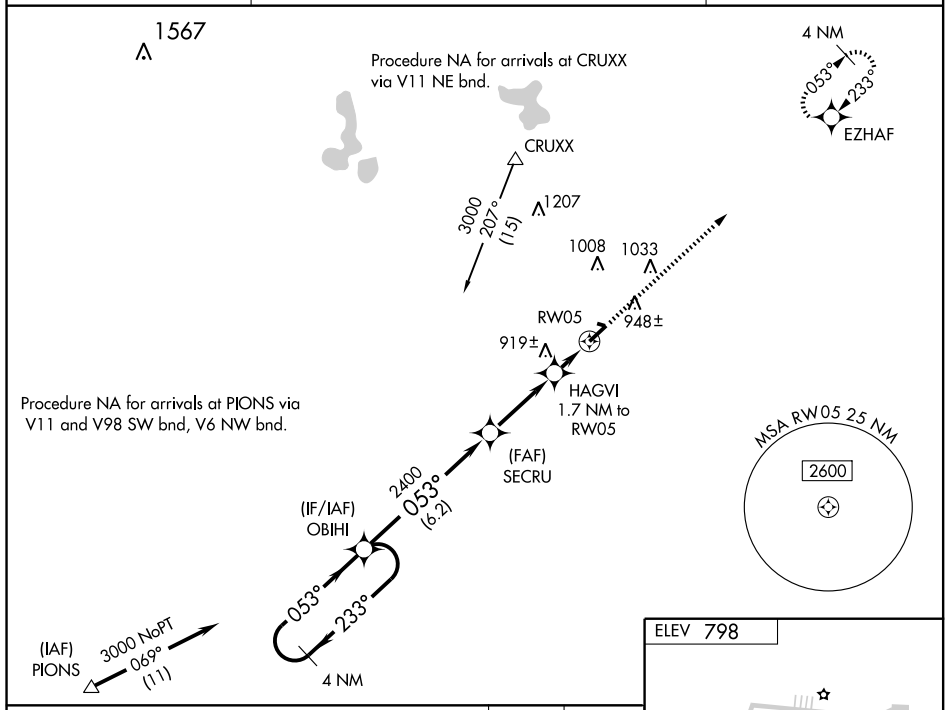
RNAV (GPS) RWY 5

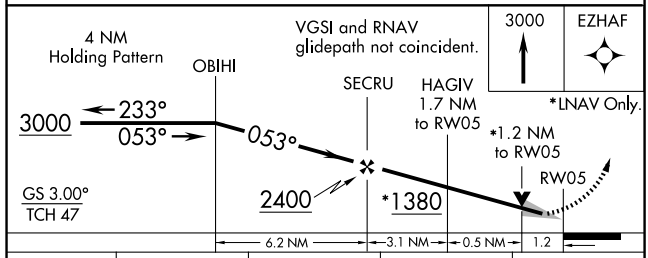
ADRIAN / LENAWEE COUNTY (ADG)

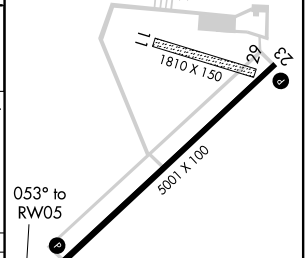
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA. When local altimeter setting not received, use Ann Arbor Muni altimeter setting and increase all DAs 66 ft and all MDAs 80 ft, and increase LPV all Cats, LNAV Cat D and Circling Cat C visibility ¼ mile. Baro-VNAV and VDP NA when using Ann Arbor Muni altimeter setting.

MISSED APPROACH: Climb to 3000 direct EZHAF and hold.

ASOS	TOLEDO APP CON	UNICOM
118.375	134.35 317.55	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1048-¾ 250 (300-¾)			
LNAV/ DA VNAV	1119-1¼ 321 (400-1¼)			
LNAV MDA	1200-1 402 (500-1)		1200-1¼ 402 (500-1¼)	
CIRCLING	1300-1 502 (600-1)	1320-1 522 (600-1)	1320-1½ 522 (600-1½)	1380-2 582 (600-2)

HIRL Rwy 5-23 L
REIL Rwy 5

EC-1, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5001
233°	TDZE	798
	Apt Elev	798

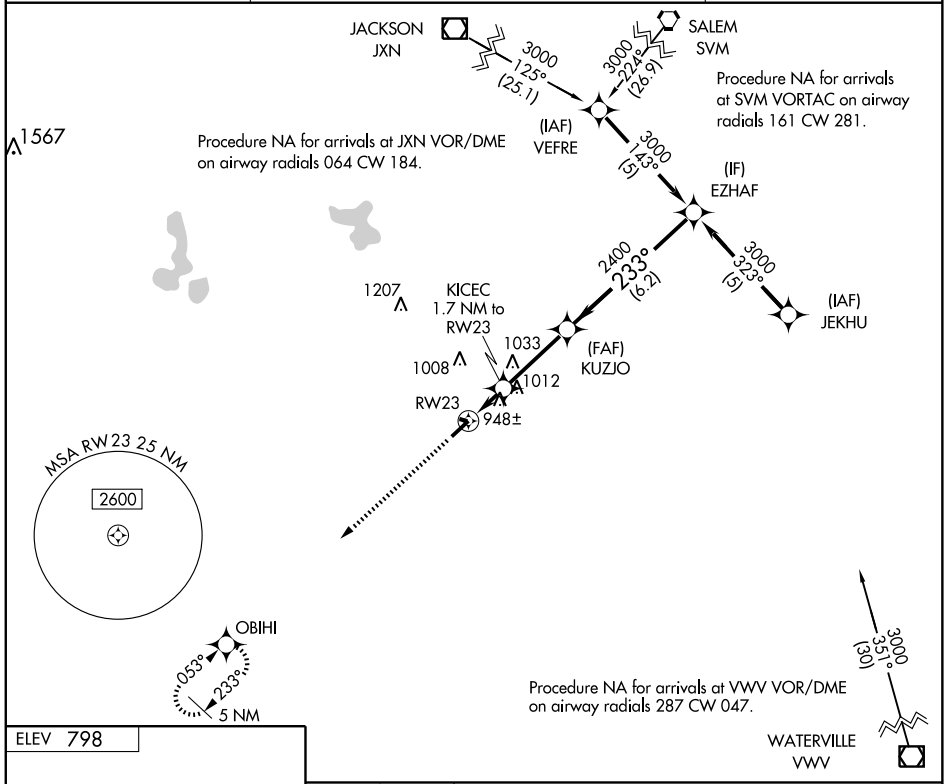
RNAV (GPS) RWY 23

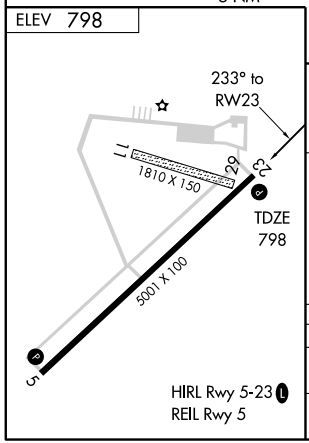
ADRIAN / LENAWEE COUNTY (ADG)

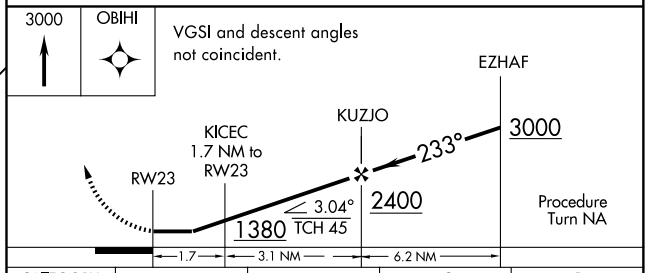
If local altimeter setting not received, use Ann Arbor Muni altimeter setting and increase all MDAs 80 feet.
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct OBIHI and hold.

ASOS	TOLEDO APP CON	UNICOM
118.375	134.35 317.55	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1260-1 462 (500-1)		1260 -1¼ 462 (500-1¼)	1260-1½ 462 (500-1½)
CIRCLING	1300-1 502 (600-1)	1320-1 522 (600-1)	1320-1½ 522 (600-1½)	1380-2 582 (600-2)

VOR/DME PMM 112.1 Chan 58	APP CRS 254°	Rwy ldg 4300 TDZE 704 Apt Elev 708

VOR or GPS RWY 29

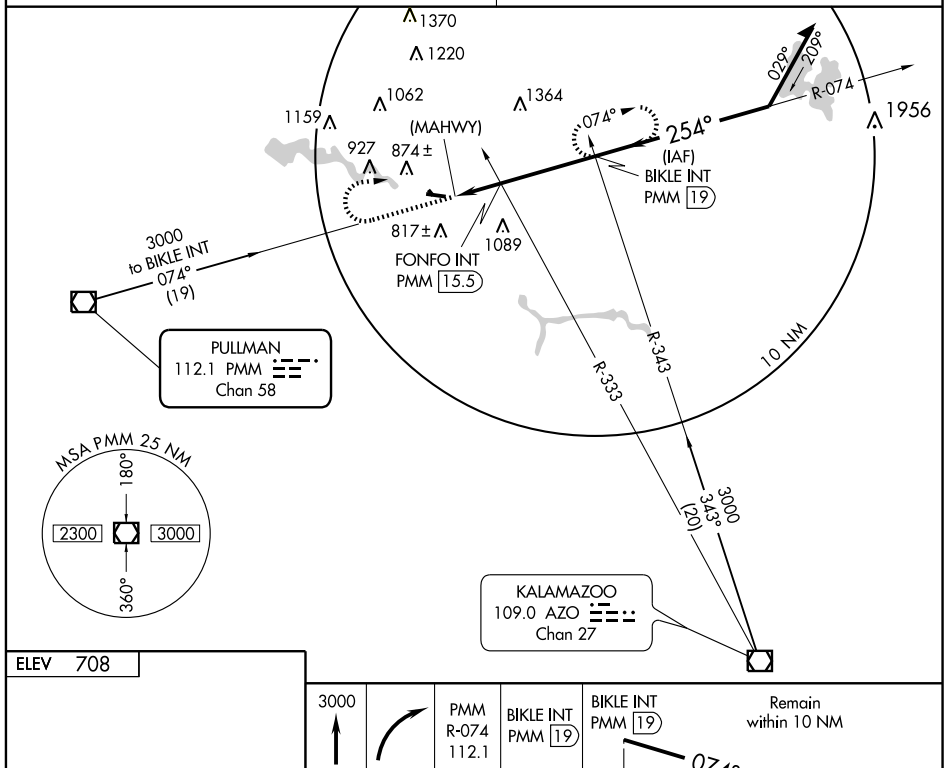
ALLEGAN / PADGHAM FIELD (35D)

Obtain local altimeter setting on CTAF; when not received, use Grand Rapids altimeter setting and increase all MDAs 100 feet and all visibilities ¼ mile.

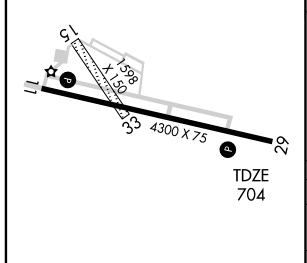
NA

MISSED APPROACH: Climb to 3000 then right turn via PMM R-074 to BIKLE Int/PMM 19 DME and hold.

GRAND RAPIDS APP CON ★	UNICOM
128.4 257.6	122.8 (CTAF) L

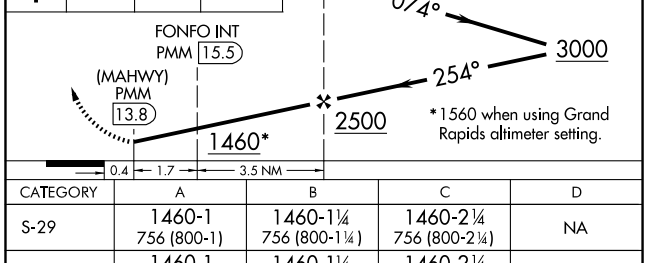


ELEV 708



REIL Rwy 29 L
REIL Rwy 11
MIRL Rwy 11-29 L

FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44



CATEGORY	A	B	C	D
S-29	1460-1 756 (800-1)	1460-1¼ 756 (800-1¼)	1460-2¼ 756 (800-2¼)	NA
CIRCLING	1460-1 752 (800-1)	1460-1¼ 752 (800-1¼)	1460-2¼ 752 (800-2¼)	NA
FONFO INT MINIMUMS				
S-29	1400-1 696 (700-1)		1400-2 696 (700-2)	NA
CIRCLING	1400-1 692 (700-1)		1400-2 692 (700-2)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4999
095°	TDZE	752
	Apt Elev	754

RNAV (GPS) RWY 9

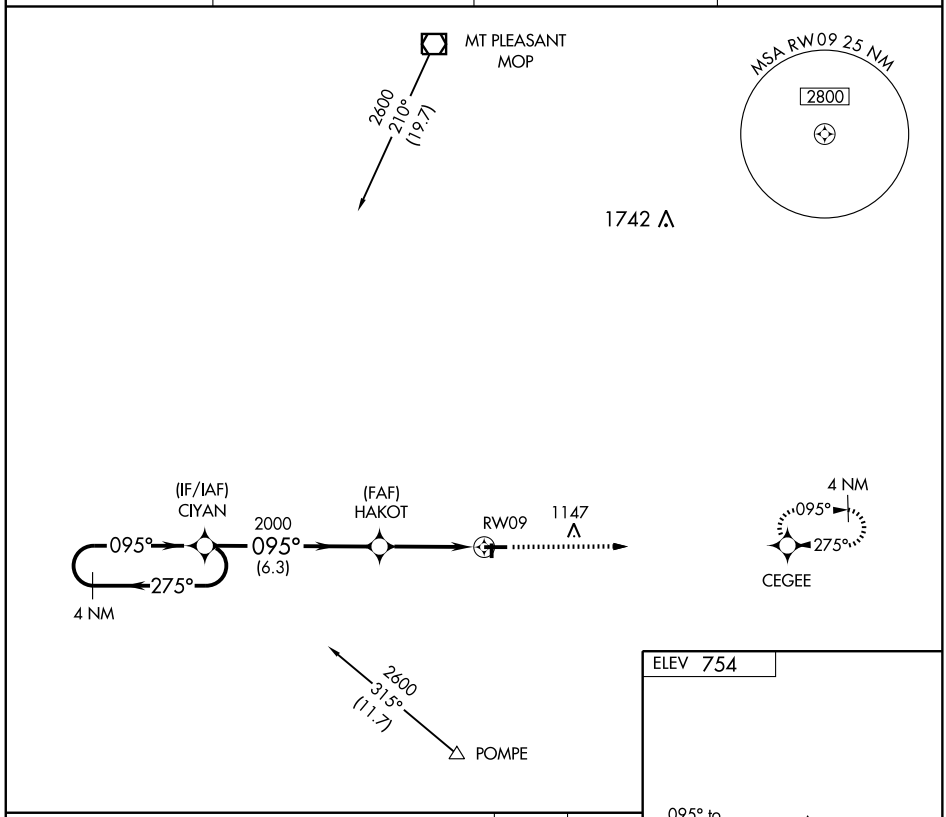
ALMA/ GRATIOT COMMUNITY (AMN)

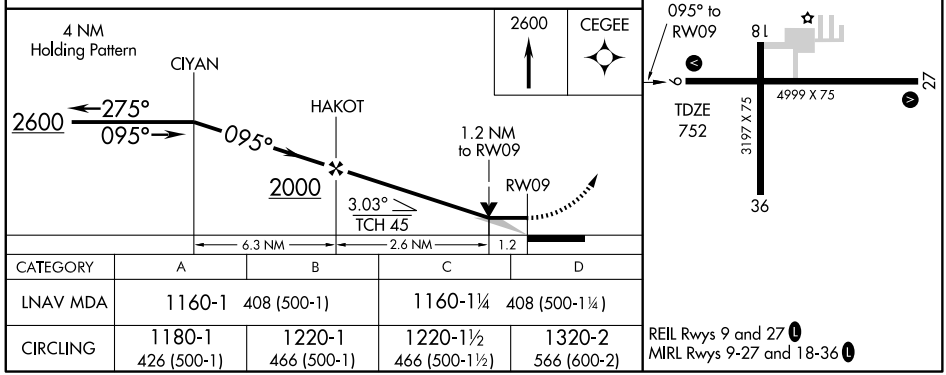
NA

GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.
Circling NA at night to Rwys 18 and 36.

MISSED APPROACH: Climb to 2600 direct CEGEE WP and hold.

AWOS-3	SAGINAW APP CON *		CLNC DEL	UNICOM
124.175	126.45	235.625	119.25	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1160-1 408 (500-1)		1160-1¼ 408 (500-1¼)	
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	1320-2 566 (600-2)

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3197
185°	TDZE	754
	Apt Elev	754

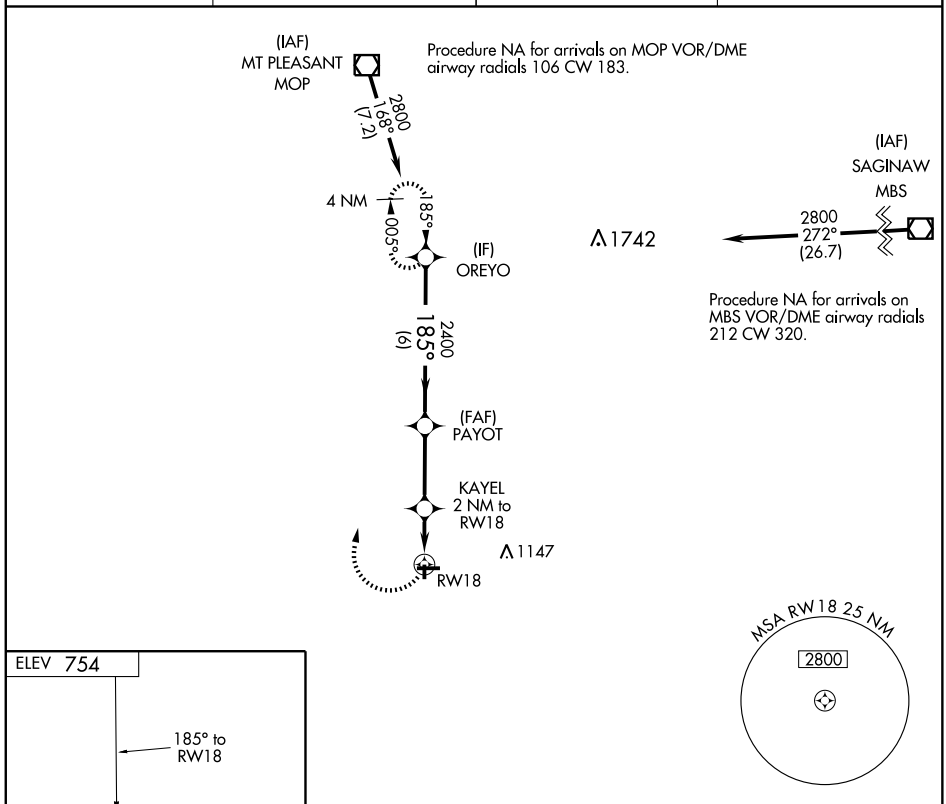
RNAV (GPS) RWY 18
ALMA/GRATIOT COMMUNITY (AMN)

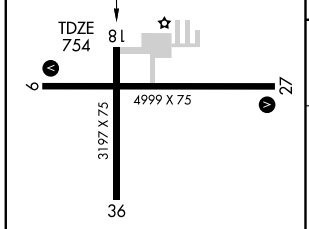
NA

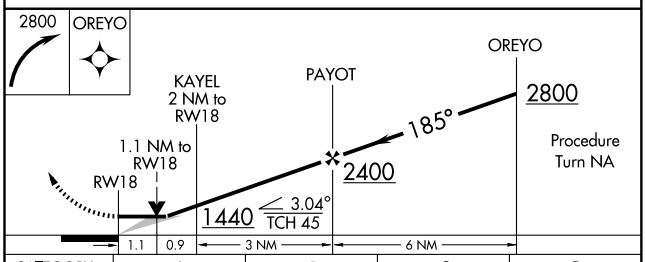
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Straight-in minimums NA at night.
Circling NA at night to Rwys 18 and 36.

MISSED APPROACH: Climbing right turn to 2800 direct OREYO WP and hold.

AWOS-3	SAGINAW APP CON ★		CLNC DEL	UNICOM
124.175	126.45	235.625	119.25	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1160-1 406 (500-1)		1160-1¼ 406 (500-1¼)	NA
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4999
275°	TDZE	754
	Apt Elev	754

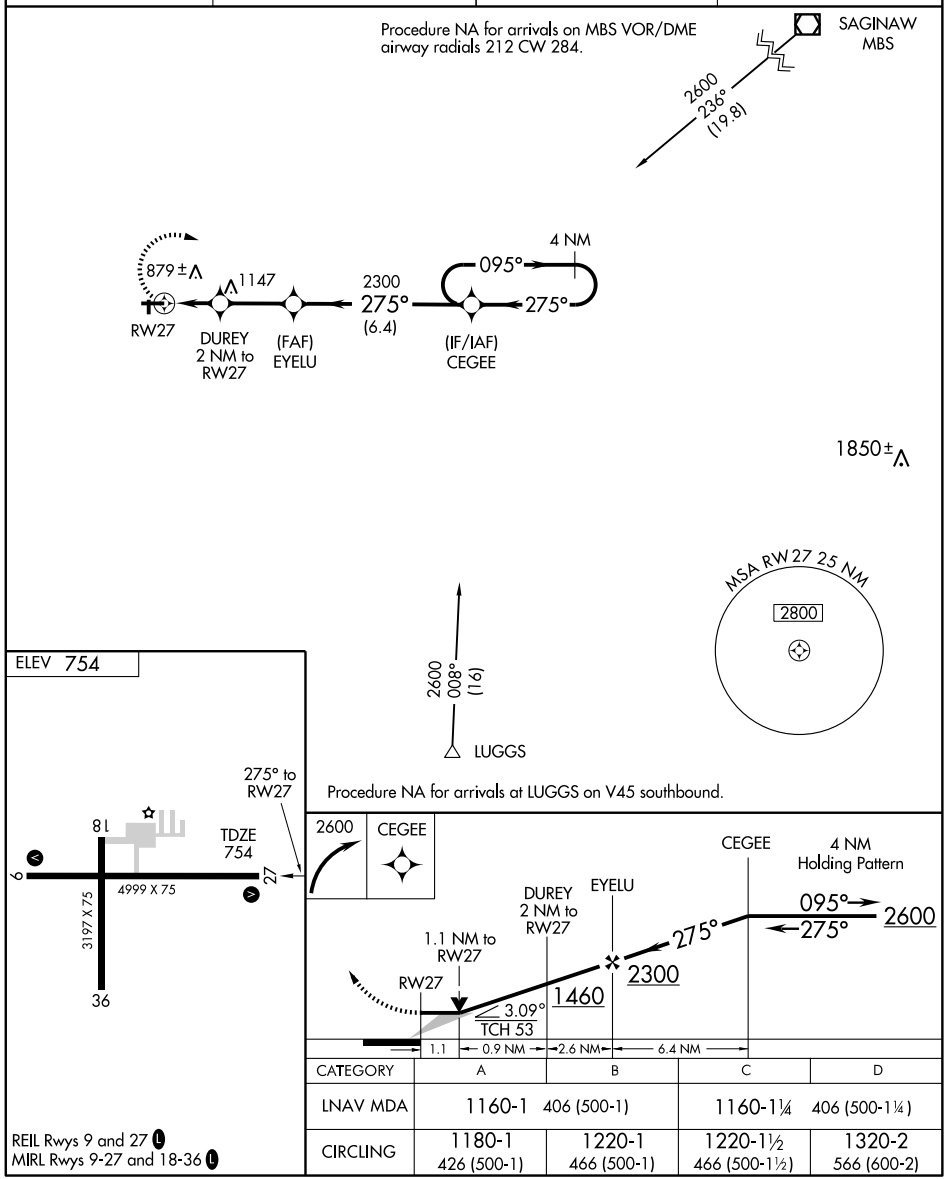
RNAV (GPS) RWY 27
ALMA/ GRATIOT COMMUNITY (AMN)

NA

GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.
Circling NA at night to Rwys 18 and 36.

MISSED APPROACH: Climbing right turn to 2600 direct CEGEE WP and hold.

AWOS-3	SAGINAW APP CON *		CLNC DEL	UNICOM
124.175	126.45	235.625	119.25	122.8 (CTAF) L



CATEGORY	A	B	C	D
LNAV MDA	1160-1 406 (500-1)		1160-1¼ 406 (500-1¼)	
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	1320-2 566 (600-2)

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MOP	APP CRS	Rwy ldg	3197
110.6	178°	TDZE	754
Chan 43		Apt Elev	754

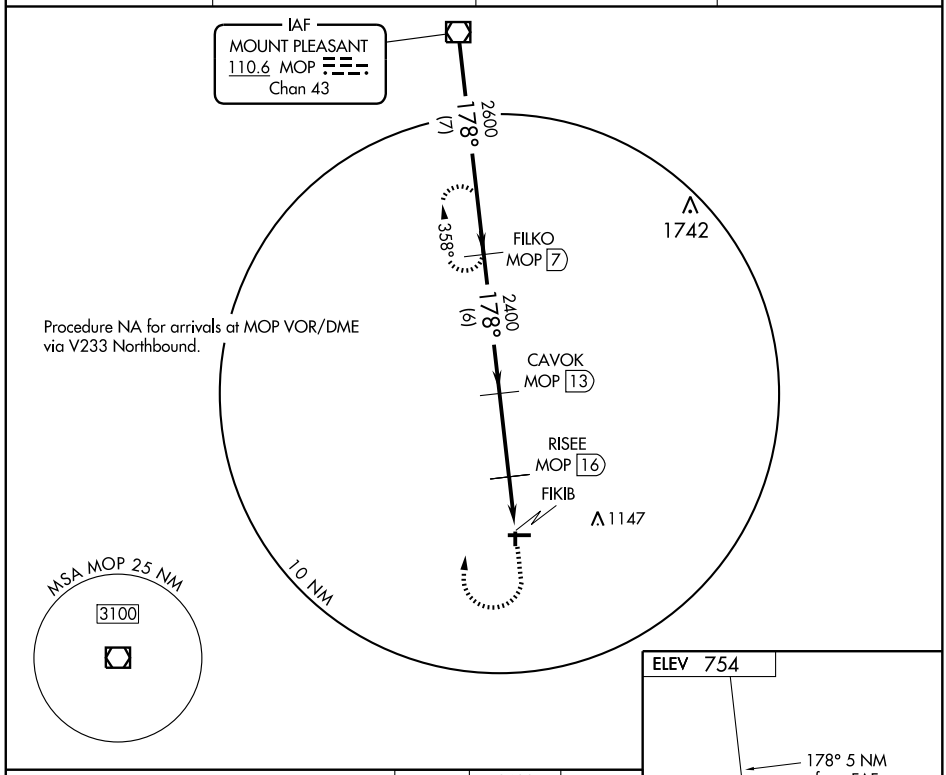
VOR/DME RWY 18

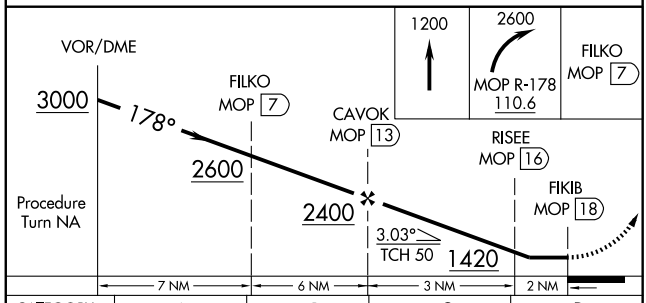
ALMA / GRATIOT COMMUNITY (AMN)

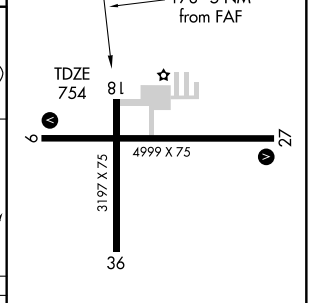
NA

MISSED APPROACH: Climb to 1200, then climbing right turn to 2600 via MOP R-178 to FILKO/7 DME and hold.

AWOS-3	SAGINAW APP CON ★		CLNC DEL	UNICOM
124.175	126.45	235.625	119.25	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-18	1140-1 386 (400-1)		1140-1¼ 386 (400-1¼)	NA
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

HI-ILS/DME RWY 1

LOC I-APN	APCH CRS	Rwy ldg / TDZE / Arpt Elev
109.7	007°	9001 / 685 / 689

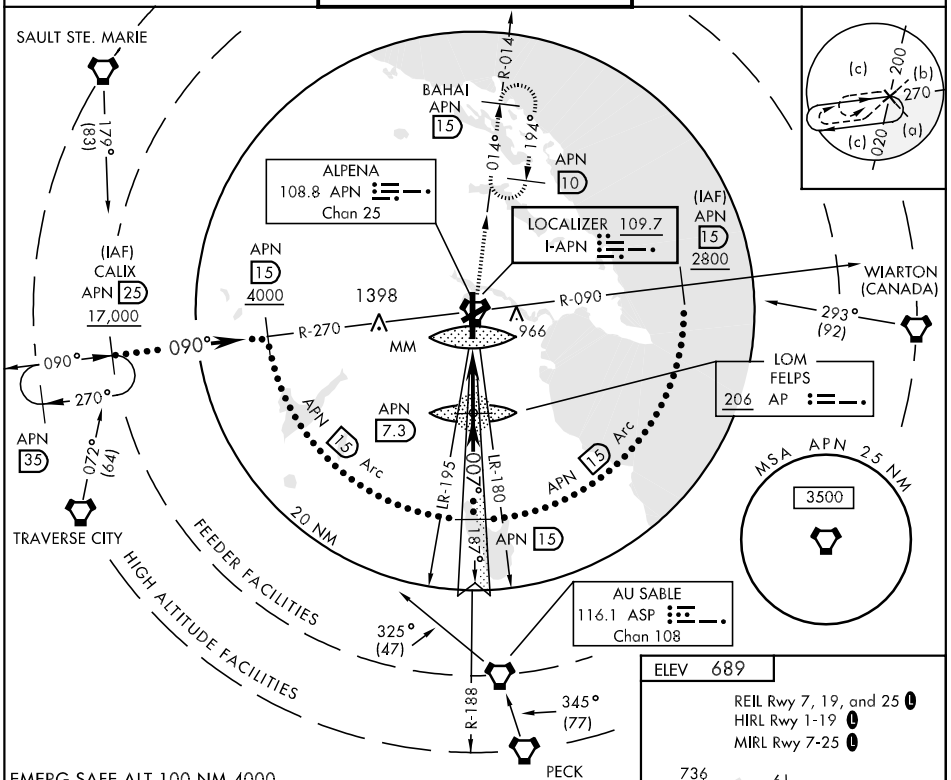
JAL-718 [USAF]

ALPENA COUNTY RGNL (KAPN)

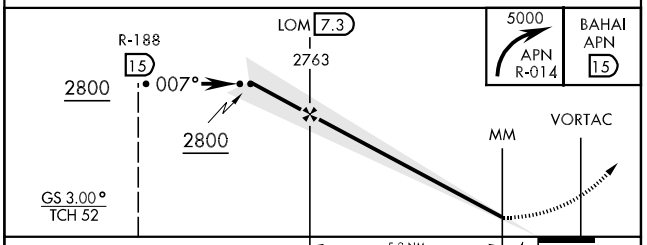
MALSR

MISSED APPROACH: Climb to 5000 via R-014 to BAHAI 15 DME and hold.

ALPENA APP CON	ALPENA TOWER ★	GND CON
128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8

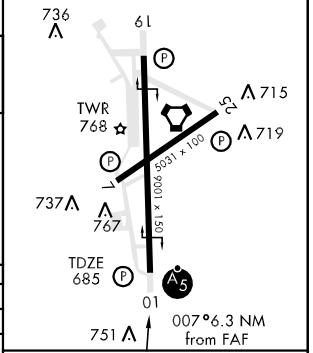


EMERG SAFE ALT 100 NM 4000



ELEV 689

REIL Rwy 7, 19, and 25 L
HIRL Rwy 1-19 L
MIRL Rwy 7-25 L



CATEGORY	C	D	E
S-ILS 1	885-½ 200 (200-½)		
S-LOC 1	1140-¾ 455 (500-¾)	1140-1 455 (500-1)	
CIRCLING	1140-1½ 451 (500-1½)	1240-2 551 (600-2)	1280-2 591 (600-2)

FAF to MAP 6.3 NM					
Knots	120	140	160	180	200
Min:Sec	3:09	2:42	2:22	2:06	1:53

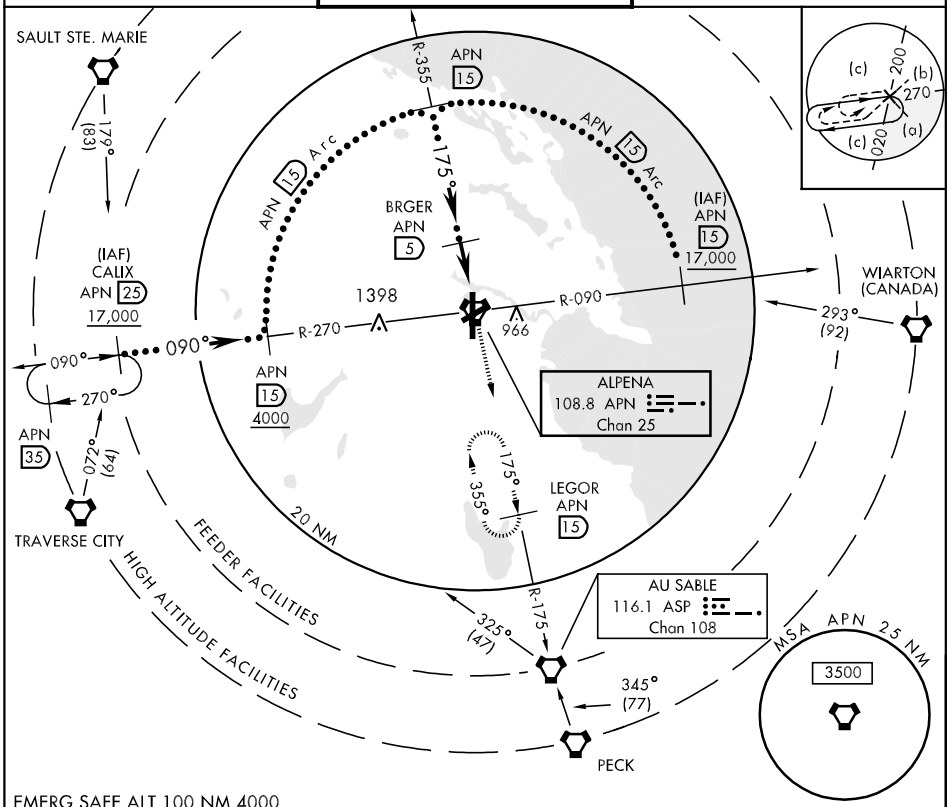
HI-TACAN RWY 19

VORTAC APN	APCH CRS	Rwy ldg / TDZE / Arpt Elev	JAL-718 [USAF]
108.8 Chan 25	175°	9001 / 683 / 689	

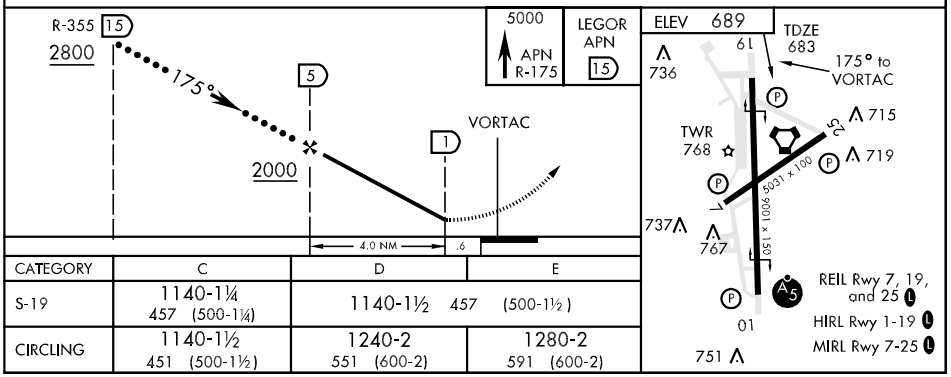
ALPENA COUNTY RGNL (KAPN)

MISSED APPROACH: Climb to 5000 via R-175 to LEGOR 15 DME and hold.

ALPENA APP CON	ALPENA TOWER ★	GND CON
128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8



EMERG SAFE ALT 100 NM 4000



CATEGORY	C	D	E
S-19	1140-1¼ 457 (500-1¼)	1140-1½ 457 (500-1½)	
CIRCLING	1140-1½ 451 (500-1½)	1240-2 551 (600-2)	1280-2 591 (600-2)

HI-VOR/DME or TACAN RWY 1

VORTAC APN	APCH CRS	Rwy ldg	9001
108.8	014°	TDZE	685
Chan 25		Arpt Elev	689

JAL-718 [USAF]

ALPENA COUNTY RGNL (KAPN)

MALSR

MISSED APPROACH: Climb to 5000 via R-014 to BAHAI 15 DME and hold.

ALPENA APP CON	ALPENA TOWER ★	GND CON
128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8

SAULT STE. MARIE
179° (83)
BAHAI APN 15
R-014
014°
194°
ALPENA 108.8 APN Chan 25
(IAF) APN 15 2800
WIARTON (CANADA)
293° (92)
(IAF) CALIX APN 25 17,000
APN 15 4000
1398
R-270
R-090
966
MM
090°
090°
270°
DIAZO APN 5
LOM FELPS 206 AP
APN 35
072° (64)
TRAVERSE CITY
APN 15 Arc
APN 15 Arc
014°
20 NM
R-194
APN 15
FEEDER FACILITIES
HIGH ALTITUDE FACILITIES
325° (47)
AU SABLE 116.1 ASP Chan 108
345° (77)
PECK
MSA APN 25 NM
3500
(c) 200 (b) 270 (c) 020 (a)

EMERG SAFE ALT 100 NM 4000

R-194 15
2800
014°
DIAZO 5
1600
1.6
VORTAC
3.4 NM
5000
APN R-014
BAHAI APN 15

ELEV 689
REIL Rwy 7, 19, and 25 L
HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
6L
736
TWR 768
715
25
719
5031 x 100
9001 x 150
737
767
TDZE 685
01
751
014° to VORTAC

CATEGORY	C	D	E
S-1	1140-¾ 455 (500-¾)	1140-1 455 (500-1)	
CIRCLING	1140-1½ 451 (500-1½)	1240-2 551 (600-2)	1280-2 591 (600-2)

LOC I-APN	APP CRS	Rwy ldg	9001
109.7	007°	TDZE	685
		Apt Elev	689

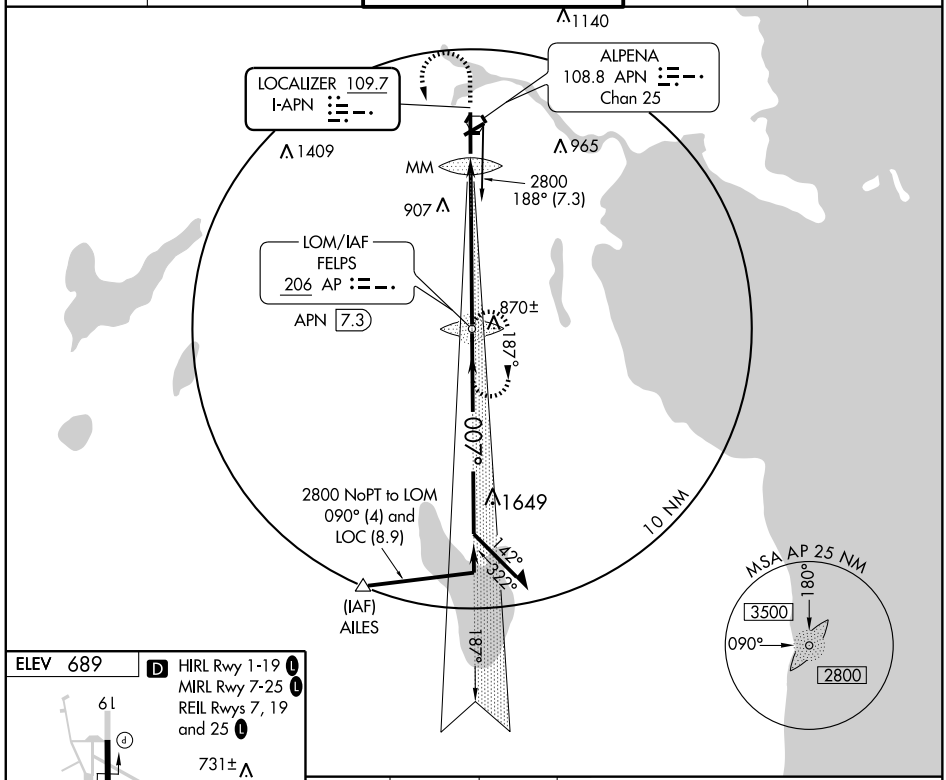
ILS RWY 1
ALPENA COUNTY RGNL (APN)

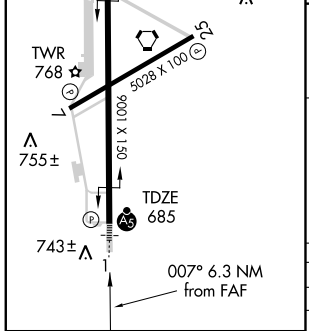
NA

MALSR

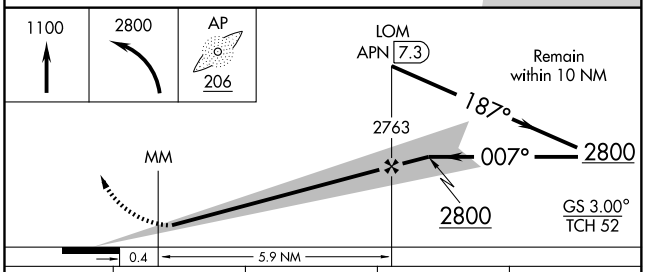
MISSED APPROACH: Climb to 1100 then climbing left turn to 2800 direct AP LOM and hold.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95





FAF to MAP 6.3 NM					
Knots	60	90	120	150	180
Min:Sec	6:18	4:12	3:09	2:31	2:06



CATEGORY	A	B	C	D
S-ILS 1	885-½ 200 (200-½)			
S-LOC 1	1140-½ 455 (500-½)		1140-¾ 455 (500-¾)	1140-1 455 (500-1)
CIRCLING	1140-1 451 (500-1)		1140-1½ 451 (500-1½)	1240-2 551 (600-2)

LOM AP	APP CRS	Rwy ldg	9001
206	007°	TDZE	685
		Apt Elev	689

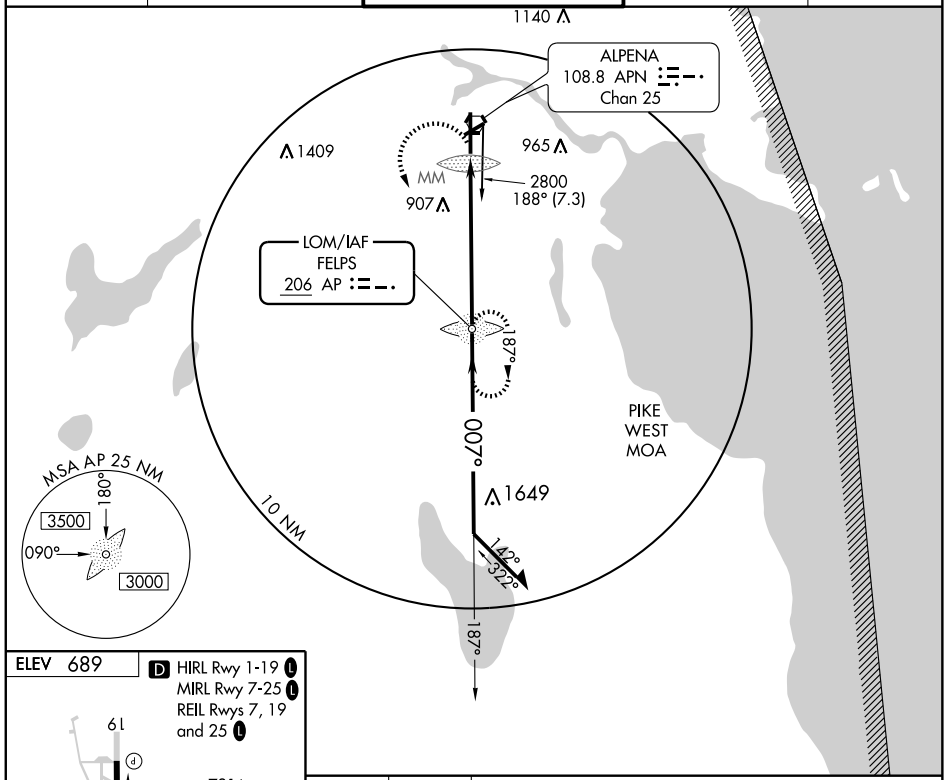
NDB RWY 1
ALPENA COUNTY RGNL (APN)

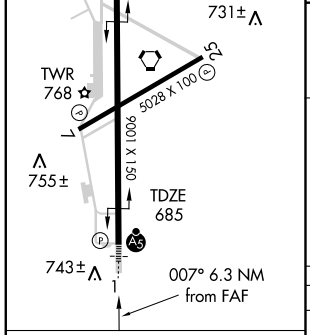
T A NA — When local altimeter setting not received, use Roger City altimeter setting and increase all MDA 60 feet and Cat C and D visibility ¼ mile.

MALSR

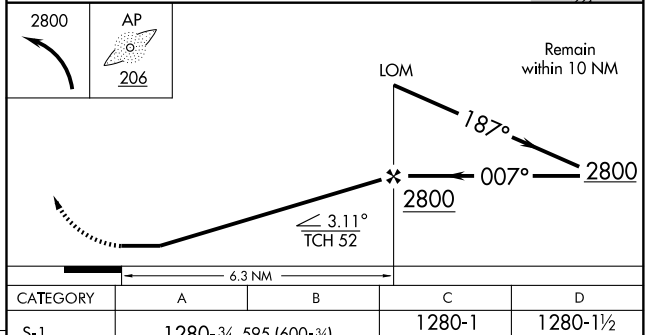
MISSED APPROACH: Climbing left turn to 2800 direct AP LOM and hold.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95





FAF to MAP 6.3 NM					
Knots	60	90	120	150	180
Min:Sec	6:18	4:12	3:09	2:31	2:06



CATEGORY	A	B	C	D
S-1	1280-¾ 595 (600-¾)		1280-1 595 (600-1)	1280-1½ 595 (600-1½)
CIRCLING	1280-1 591 (600-1)		1280-1½ 591 (600-1½)	1280-2 591 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 50310 W01A	APP CRS 007°	Rwy ldg 9001 TDZE 685 Apt Elev 689

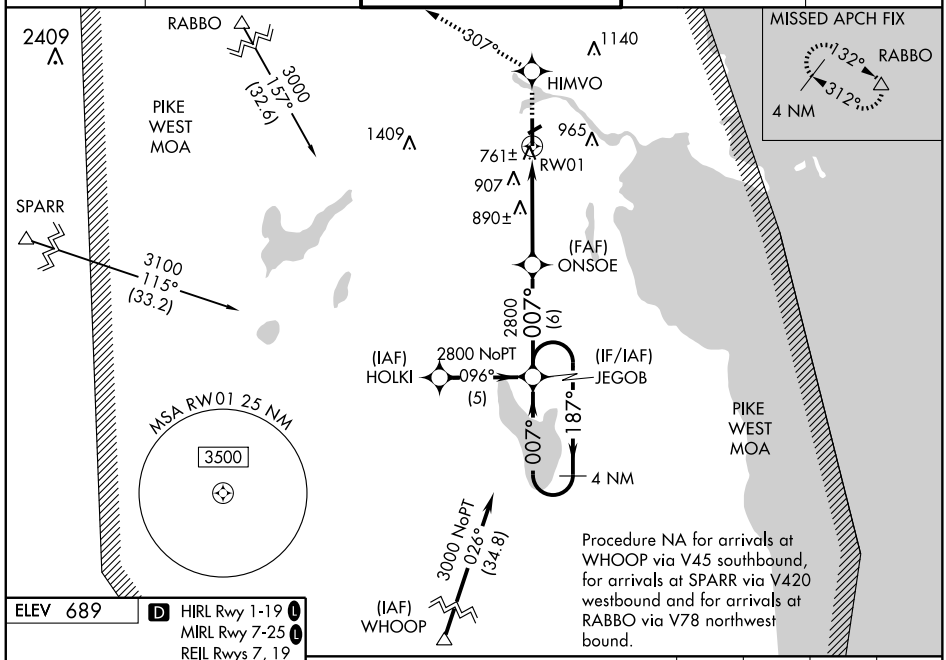
RNAV (GPS) RWY 1
ALPENA COUNTY RGNL (APN)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Roger City altimeter setting and increase all DA 55 feet and all MDA 60 feet and increase LNAV/VNAV all Cats and LNAV Cats C and D visibility ¼ mile. Baro-VNAV and VDP NA when using Roger City altimeter setting.

MALSR

MISSED APPROACH: Climb to 3500 direct HIMVO and via 307° track to RABBO and hold.

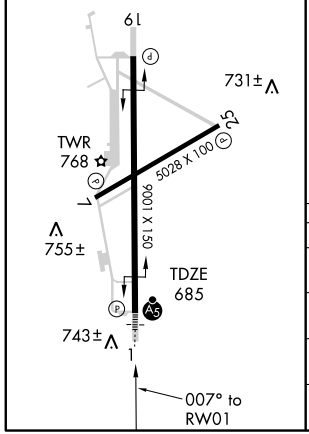
ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95

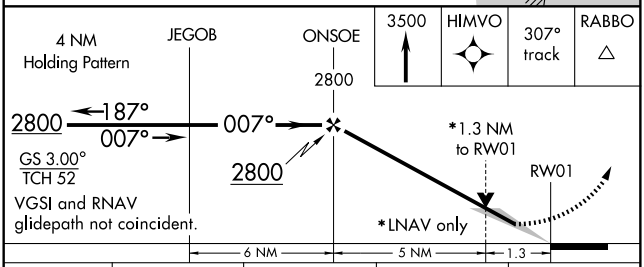


Procedure NA for arrivals at WHOOP via V45 southbound, for arrivals at SPARR via V420 westbound and for arrivals at RABBO via V78 northwest bound.

ELEV 689

D HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L





CATEGORY	A	B	C	D
LPV DA	885-½ 200 (200-½)			
LNAV/VNAV DA	1029-¾ 344 (400-¾)			
LNAV MDA	1160-½ 475 (500-½)		1160-¾ 475 (500-¾)	1160-1 475 (500-1)
CIRCLING	1160-1 471 (500-1)		1160-1½ 471 (500-1½)	1260-2 571 (600-2)

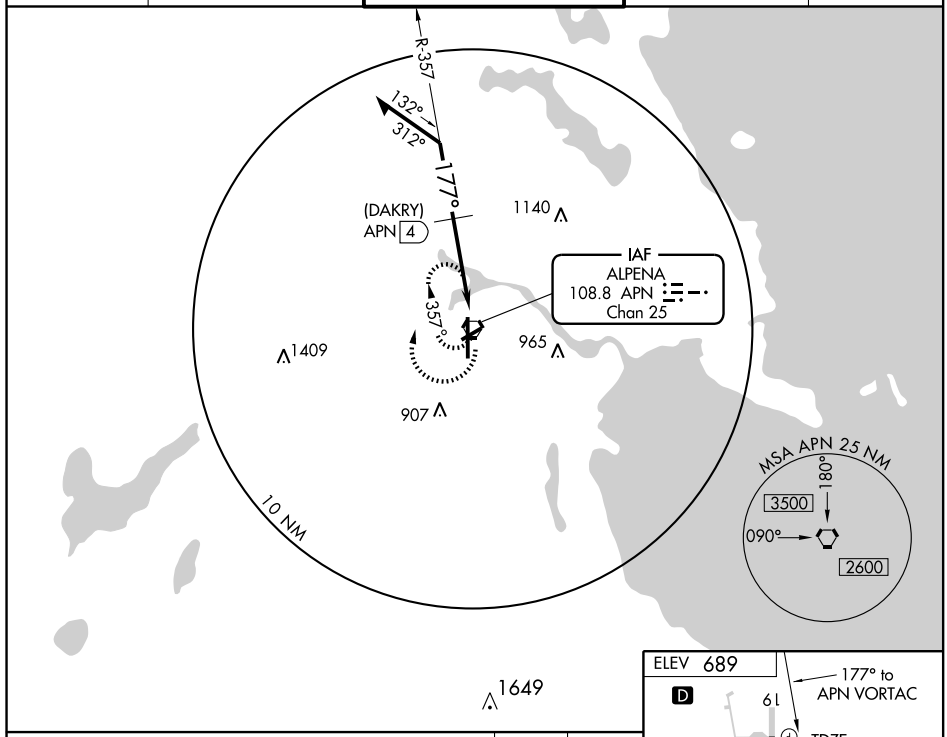
EC-1. 14 JAN 2010 to 11 FEB 2010

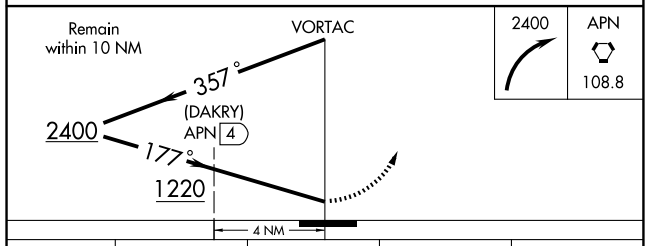
VORTAC APN	APP CRS	Rwy ldg	9001
108.8	177°	TDZE	683
Chan 25		Apt Elev	689

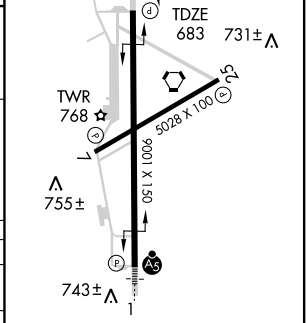
VOR or GPS RWY 19
ALPENA COUNTY RGNL (APN)

MISSED APPROACH: Climbing right turn to 2400 in APN VORTAC holding pattern.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95







CATEGORY	A	B	C	D
S-19	1220-1 537 (600-1)		1220-1½ 537 (600-1½)	1220-1¾ 537 (600-1¾)
CIRCLING	1220-1 531 (600-1)		1220-1½ 531 (600-1½)	1240-2 551 (600-2)
DME MINIMUMS				
S-19	1100-1 417 (500-1)		1100-1¼ 417 (500-1¼)	
CIRCLING	1120-1 431 (500-1)	1140-1 451 (500-1)	1140-1½ 451 (500-1½)	1240-2 551 (600-2)

HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

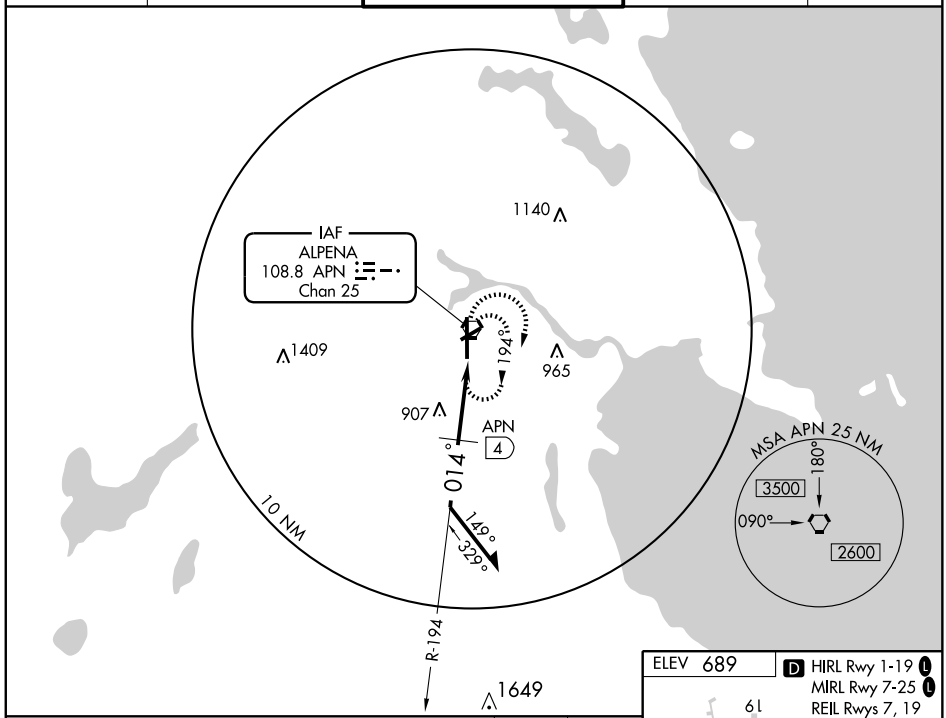
VORTAC APN	APP CRS	Rwy ldg	9001
108.8	014°	TDZE	685
Chan 25		Apt Elev	689

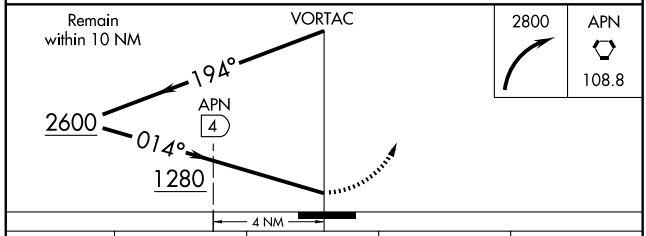
VOR RWY 1
ALPENA COUNTY RGNL (APN)

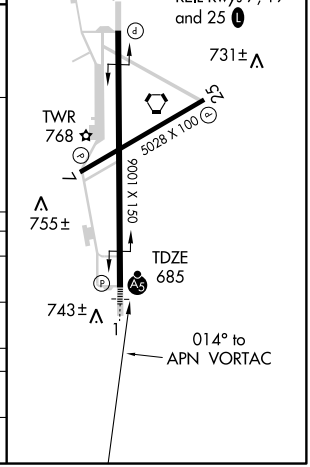
MALSR

MISSED APPROACH: Climbing right turn to 2800 in APN VORTAC holding pattern.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95







CATEGORY	A	B	C	D
S-1	1280-½ 595 (600-½)		1280-1 595 (600-1)	1280-1¼ 595 (600-1¼)
CIRCLING	1280-1 591 (600-1)		1280-1½ 591 (600-1½)	1280-2 591 (600-2)
DME MINIMUMS				
S-1	1140-½ 455 (500-½)		1140-¾ 455 (500-¾)	1140-1 455 (500-1)
CIRCLING	1140-1 451 (500-1)		1140-1½ 451 (500-1½)	1240-2 551 (600-2)

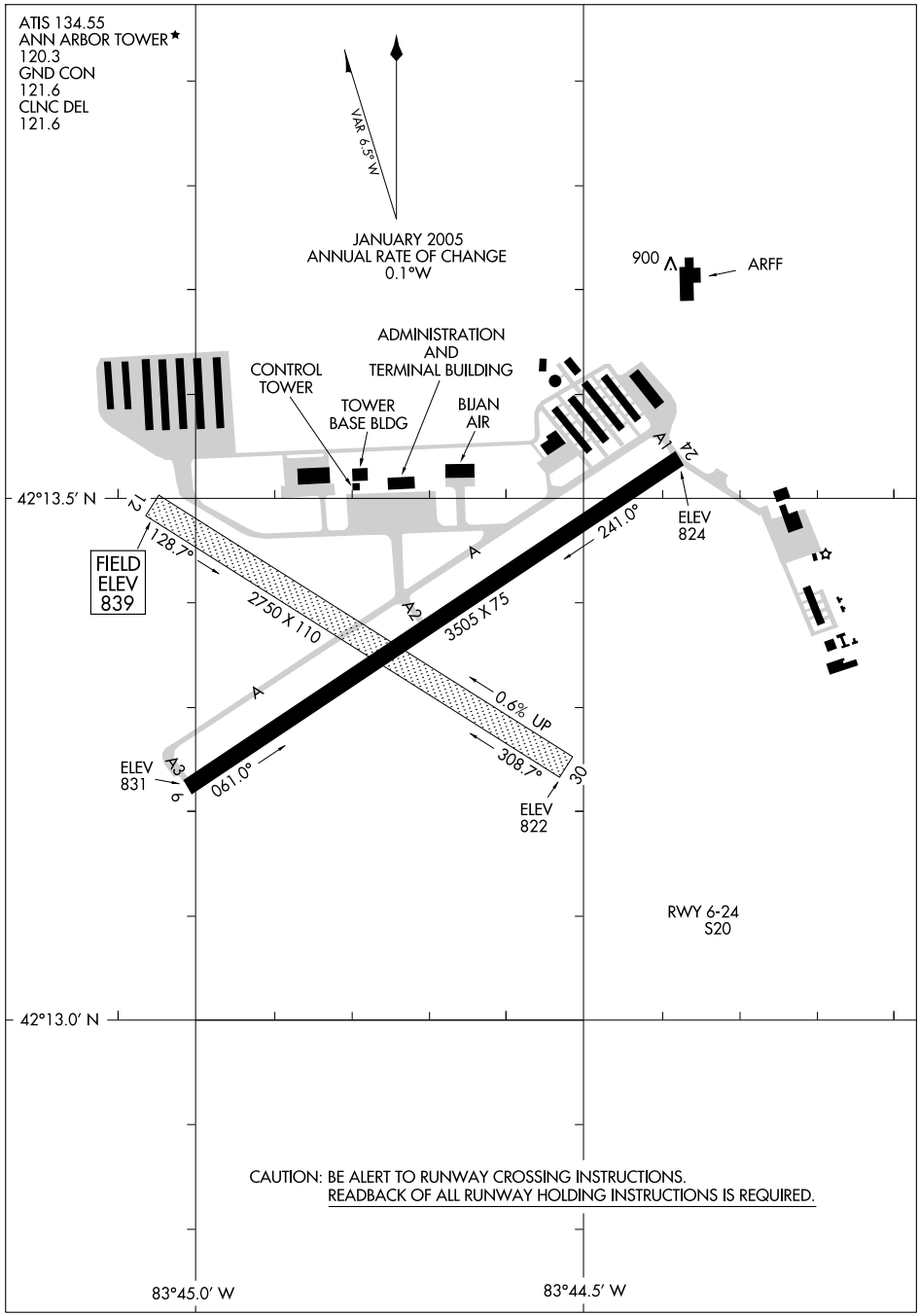
EC-1. 14 JAN 2010 to 11 FEB 2010

08045

AIRPORT DIAGRAM

AL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN

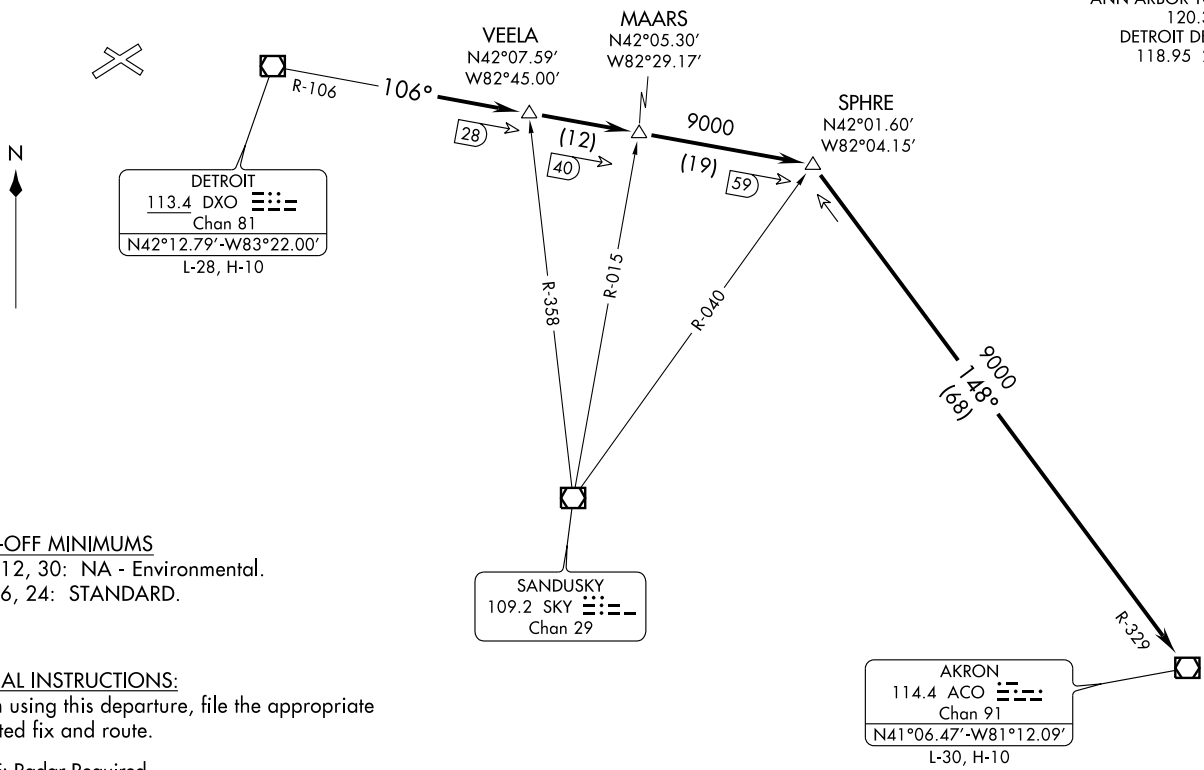


EC-1, 14 JAN 2010 to 11 FEB 2010

(ACO2.ACO) AKRON TWO DEPARTURE

08101

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275



TAKE-OFF MINIMUMS
Rwys 12, 30: NA - Environmental.
Rwys 6, 24: STANDARD.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

SL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

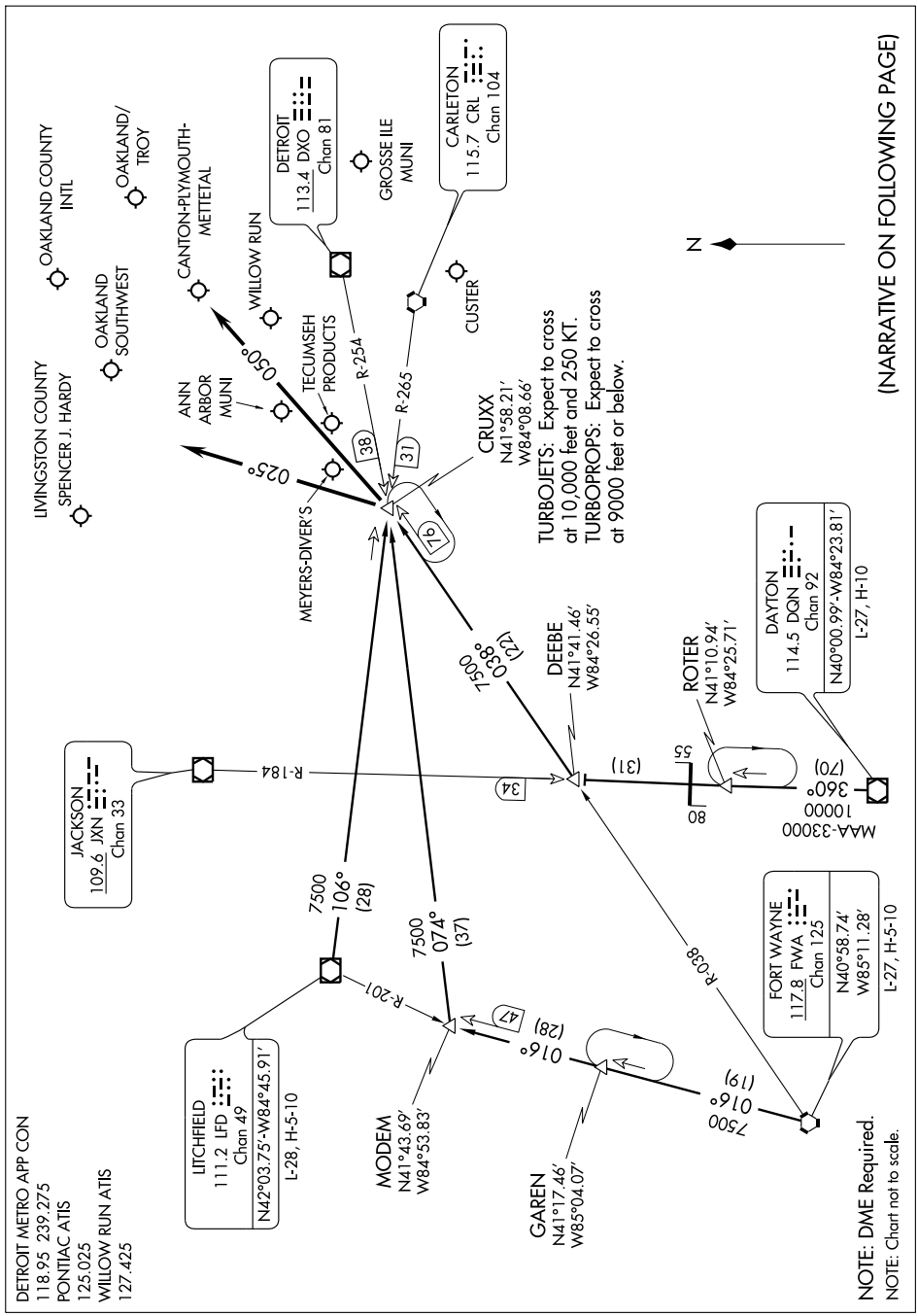
TAKE-OFF OBSTACLES

Rwy 6: Multiple Trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL.
Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL.
Multiple Trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL.
Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

Rwy 24: Multiple Trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL.
Multiple Trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL.
Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

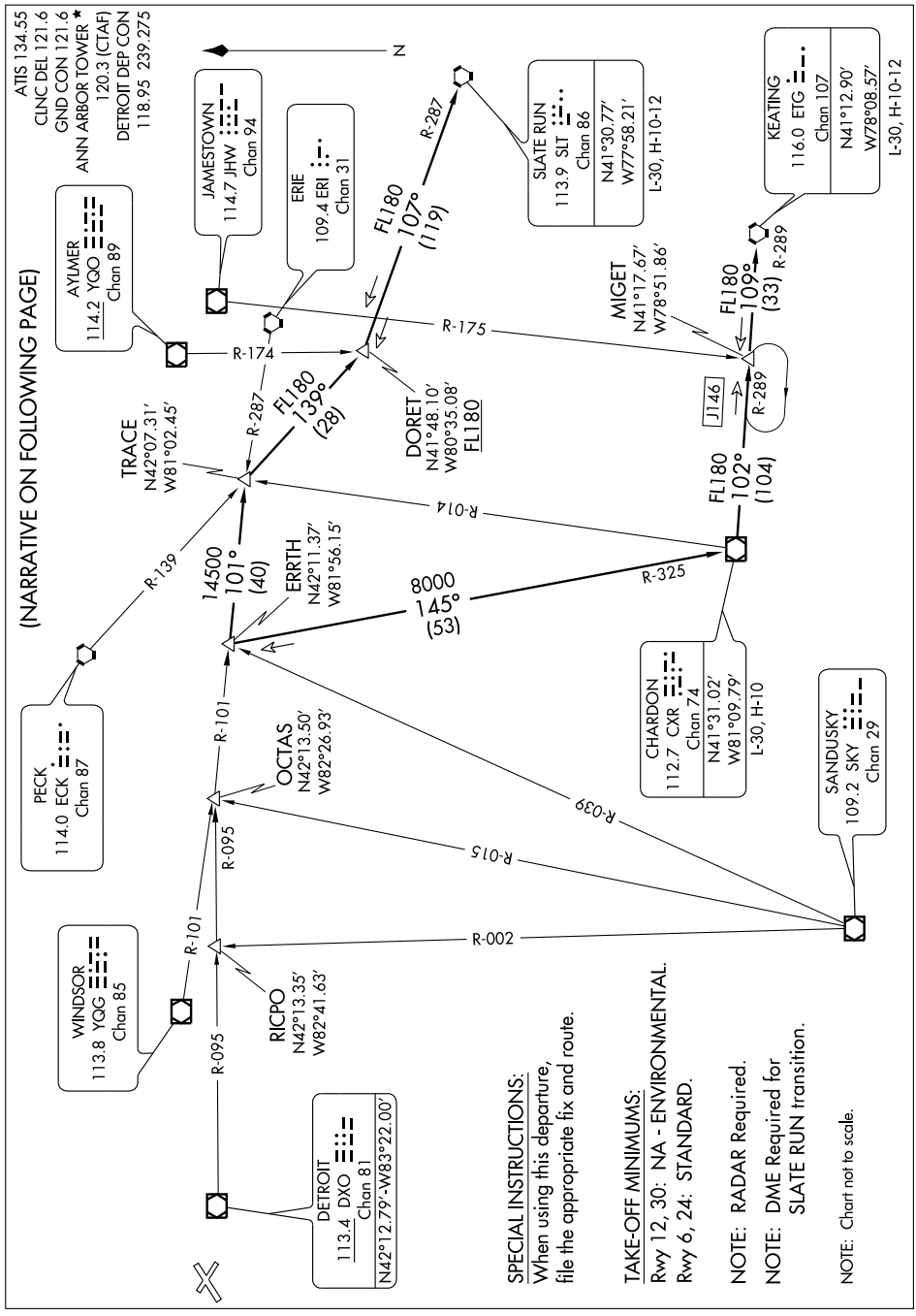
. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

ERRTH TWO DEPARTURE

SL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6 and 24: Climb via assigned heading for vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.
KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 MIGET INT to ETG VORTAC.
SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL. Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL. Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL. Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

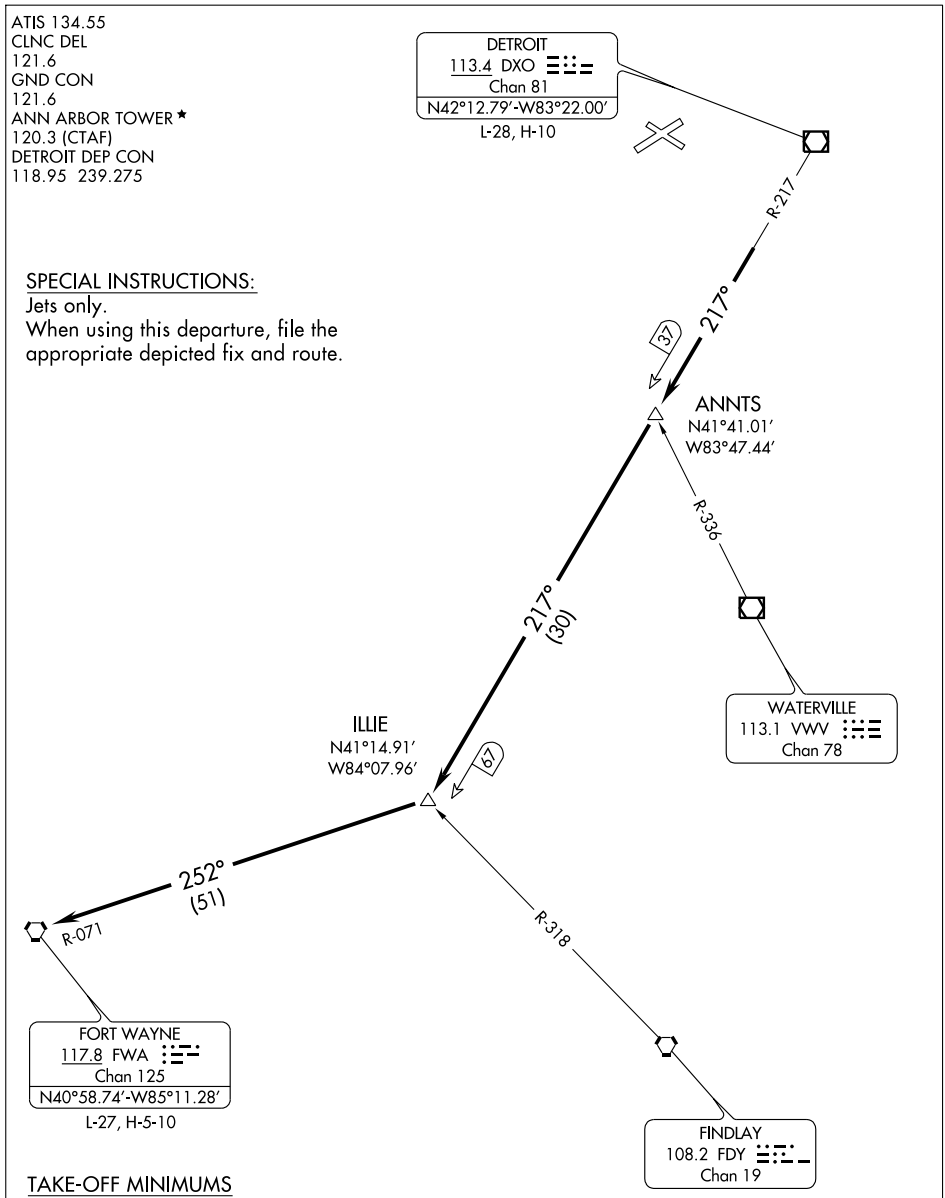
Rwy 24: Multiple trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL. Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL. Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

FORT WAYNE THREE DEPARTURE

SL-5506 (FAA)

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER *
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS
Rwys 6, 24: STANDARD.
Rwys 12, 30: NA - Environmental.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

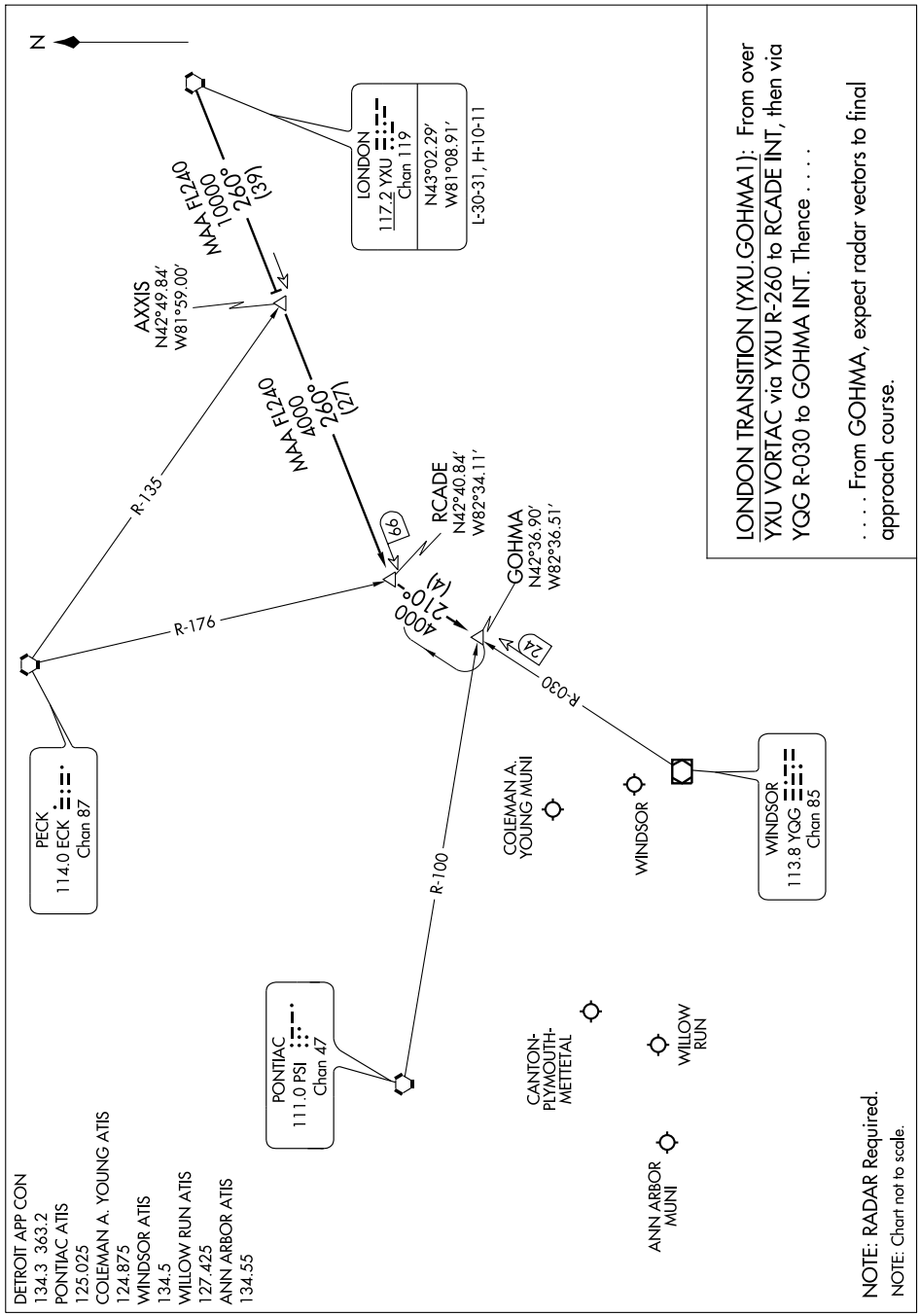
TAKE-OFF OBSTACLES:

Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL.
Building 312′ from DER, 479′ right of centerline, 15′ AGL/838 MSL.
Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL.
Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

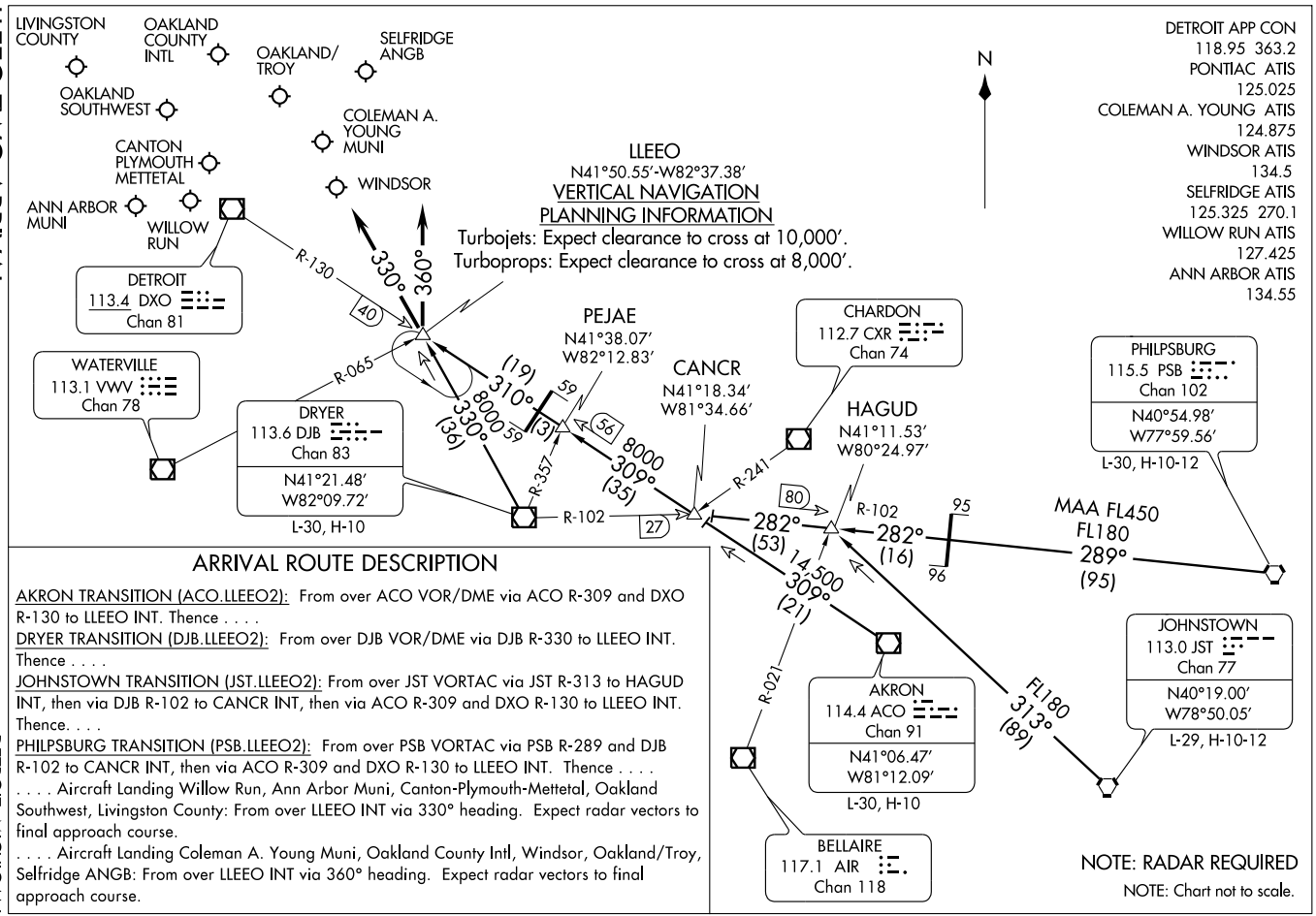
Rwy 24: Multiple trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL.
Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL.
Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

GOHMA ONE ARRIVAL

DETROIT, MICHIGAN



LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

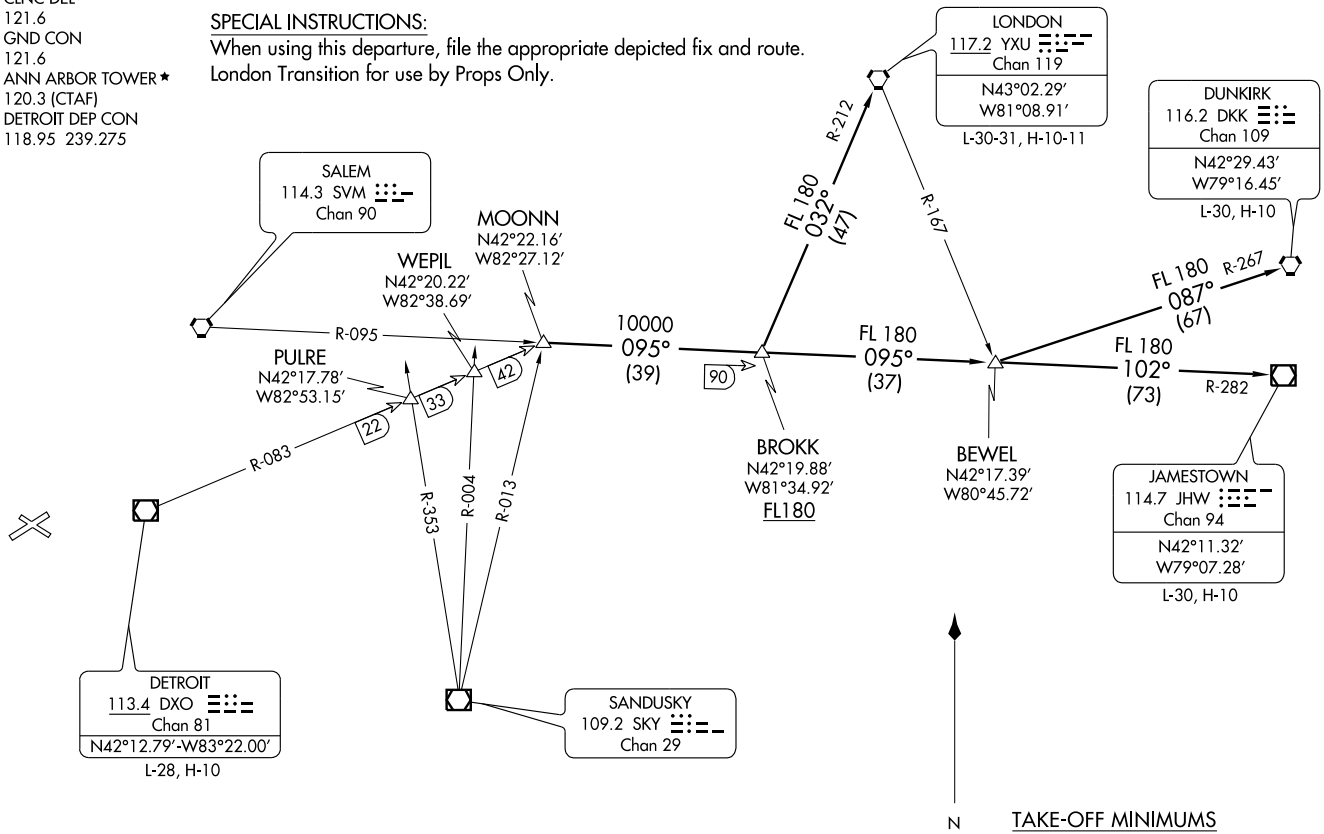
. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275

NOTE: Chart not to scale.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.
London Transition for use by Props Only.



TAKE-OFF MINIMUMS
Rwys 12, 30: NA - Environmental.
Rwys 6, 24: STANDARD.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

(MOONN2.MOONN) 09295
MOONN TWO DEPARTURE
SL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/ flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

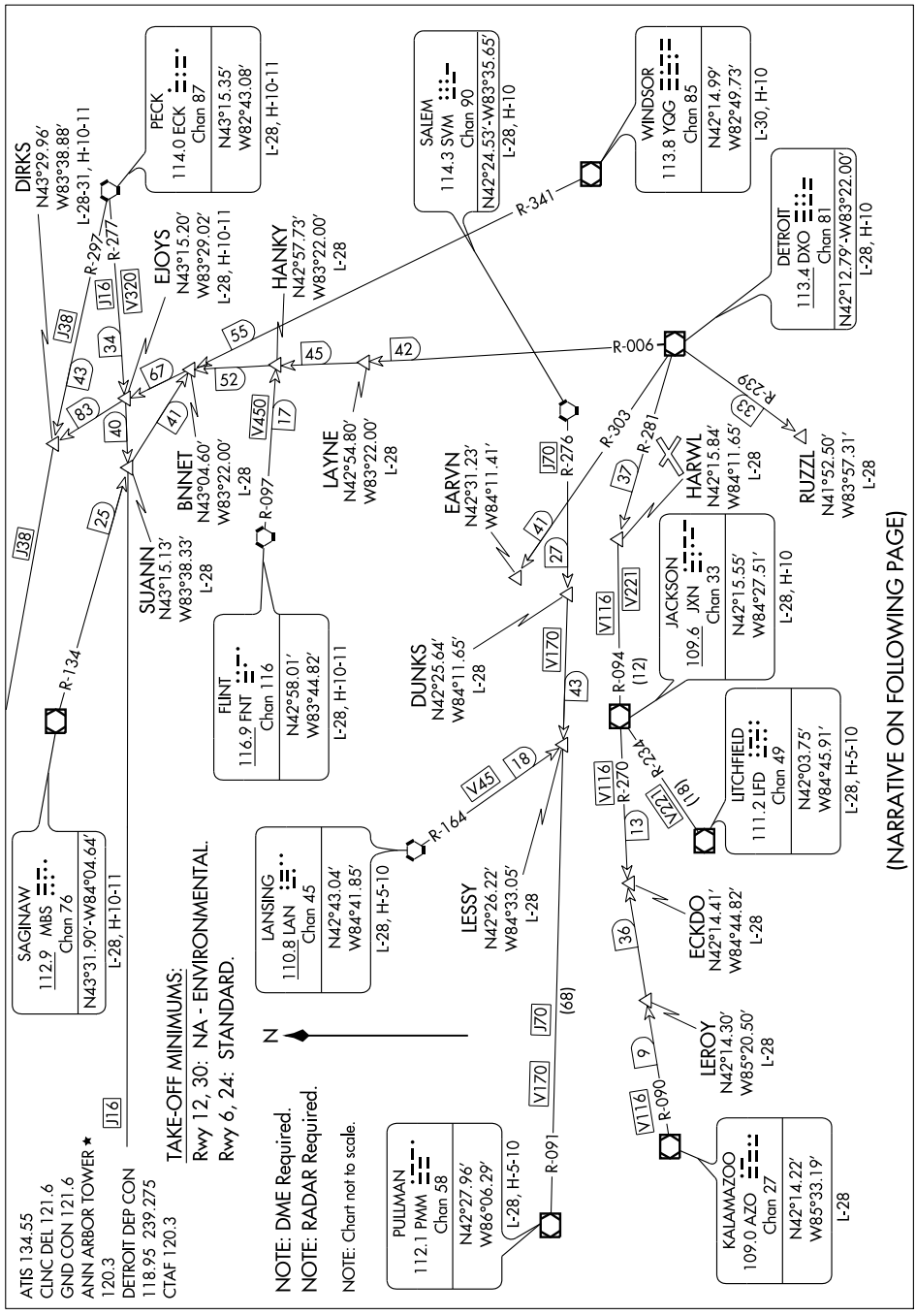
TAKE-OFF OBSTACLES

Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL. Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL. Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL. Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

Rwy 24: Multiple trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL. Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL. Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

PALACE THREE DEPARTURE

SL-5506 (FAA)



(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6 AND 24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overfling Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:

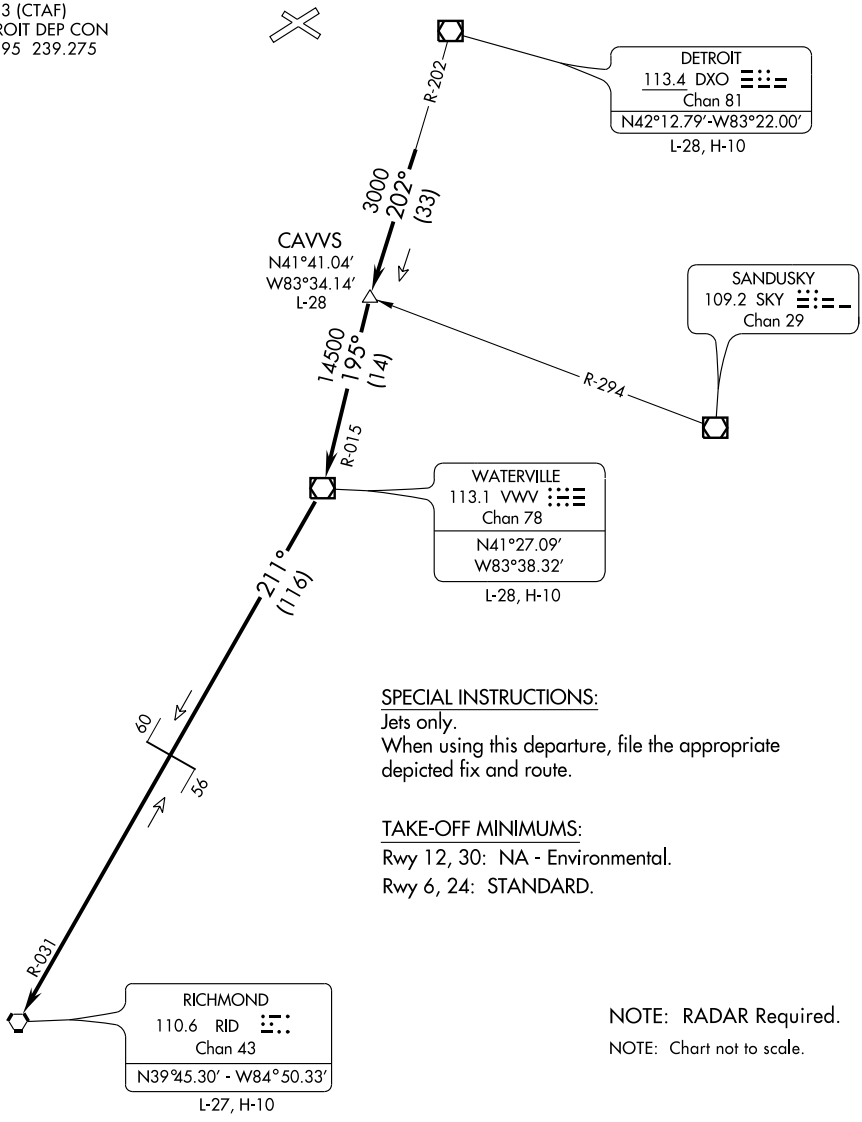
Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL. Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL. Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL. Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

Rwy 24: Multiple trees beginning 479′ from DER, 475′ left of centerline, up to 100′ AGL/929′ MSL. Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL. Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

RICHMOND FOUR DEPARTURE SL-5506 (FAA)

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwy 12, 30: NA - Environmental.
Rwy 6, 24: STANDARD.

NOTE: RADAR Required.
NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL.
Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL.
Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL.
Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

Rwy 24: Multiple trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL.
Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL.
Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

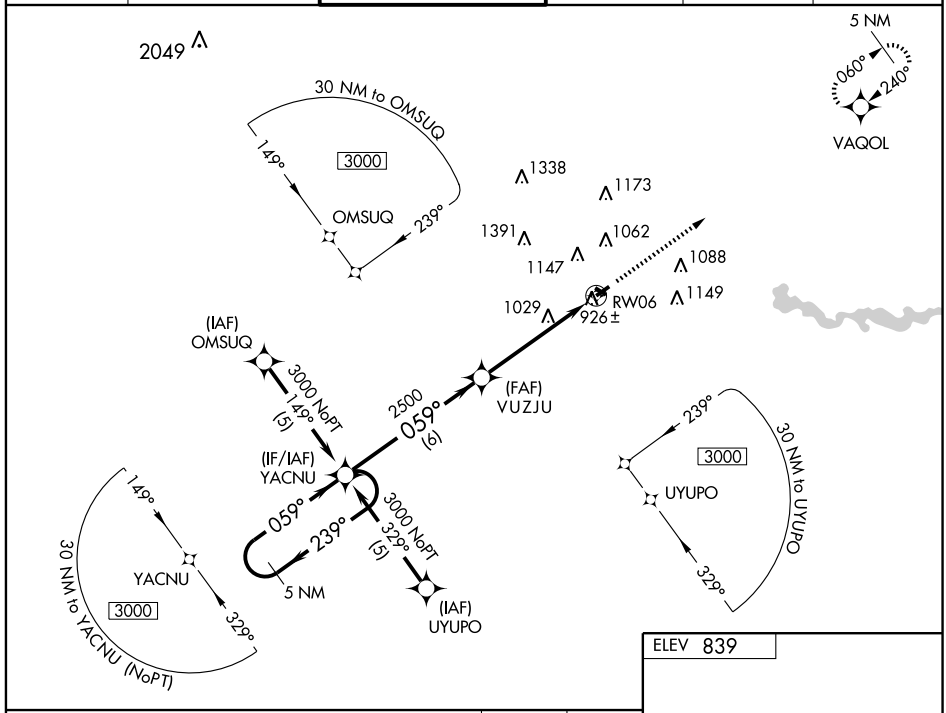
WAAS CH 77601 W06A	APP CRS 059°	Rwy ldg 3505 TDZE 831 Apt Elev 839

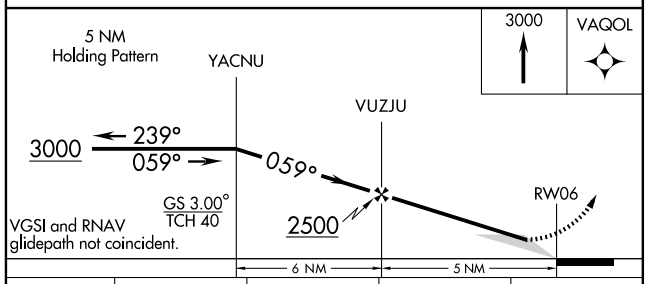
RNAV (GPS) RWY 6
ANN ARBOR MUNI (ARB)

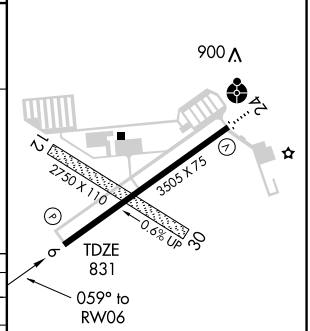
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Willow Run altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA when using Willow Run altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F).

MISSED APPROACH: Climb to 3000 direct VAQOL and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 363.2	120.3 (CTAF)	121.6	121.6	123.0







CATEGORY	A	B	C	D
LPV DA	1109-1 278 (300-1)			
LNAV/ DA VNAV	1322-1¾ 491 (500-1¾)			
LNAV MDA	1340-1 509 (600-1)		1340-1½ 509 (600-1½)	
CIRCLING	1500-1¾ 661 (700-1¾)			1500-2 661 (700-2)

MIRL Rwy 6-24
REIL Rwy 6

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 81901 W24A	APP CRS 240°	Rwy ldg 3505 TDZE 831 Apt Elev 839

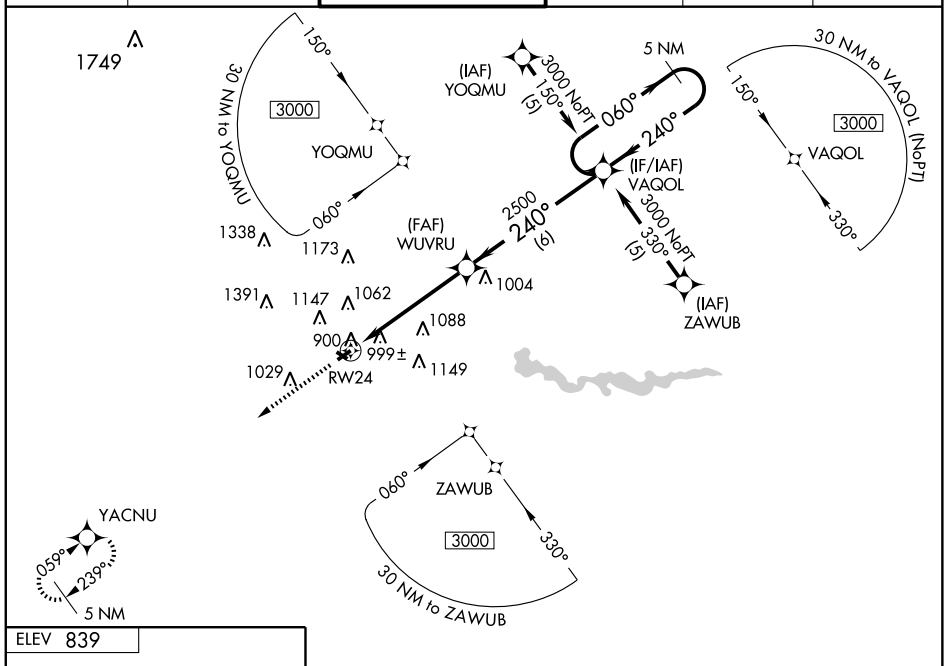
RNAV (GPS) RWY 24
ANN ARBOR MUNI (ARB)

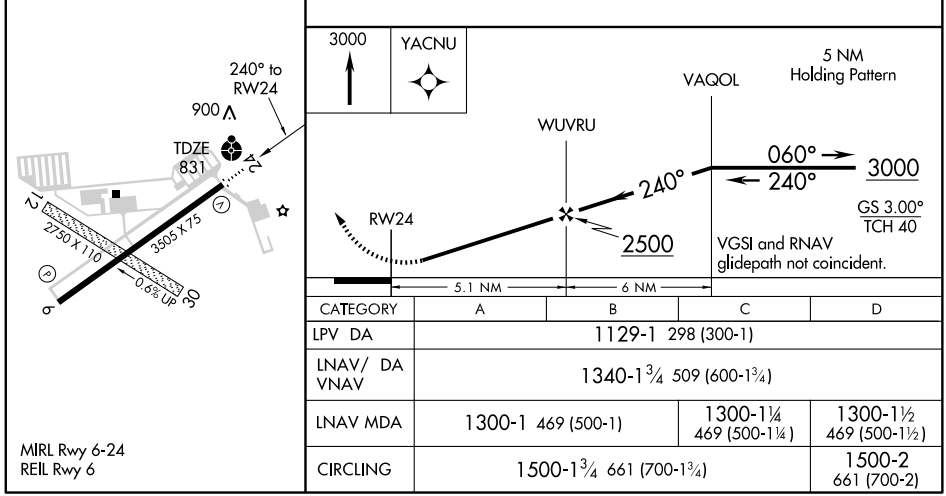
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Willow Run altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA when using Willow Run altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). Inoperative table does not apply. Visibility reduction by helicopters NA.

ODALS

MISSED APPROACH: Climb to 3000 direct YACNU and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 363.2	120.3 (CTAF) L	121.6	121.6	123.0





CATEGORY	A	B	C	D
LPV DA	1129-1 298 (300-1)			
LNAV/ VNAV DA	1340-1¾ 509 (600-1¾)			
LNAV MDA	1300-1 469 (500-1)		1300-1¼ 469 (500-1¼)	1300-1½ 469 (500-1½)
CIRCLING	1500-1¾ 661 (700-1¾)			1500-2 661 (700-2)

MIRL Rwy 6-24
REIL Rwy 6

EC-1. 14 JAN 2010 to 11 FEB 2010

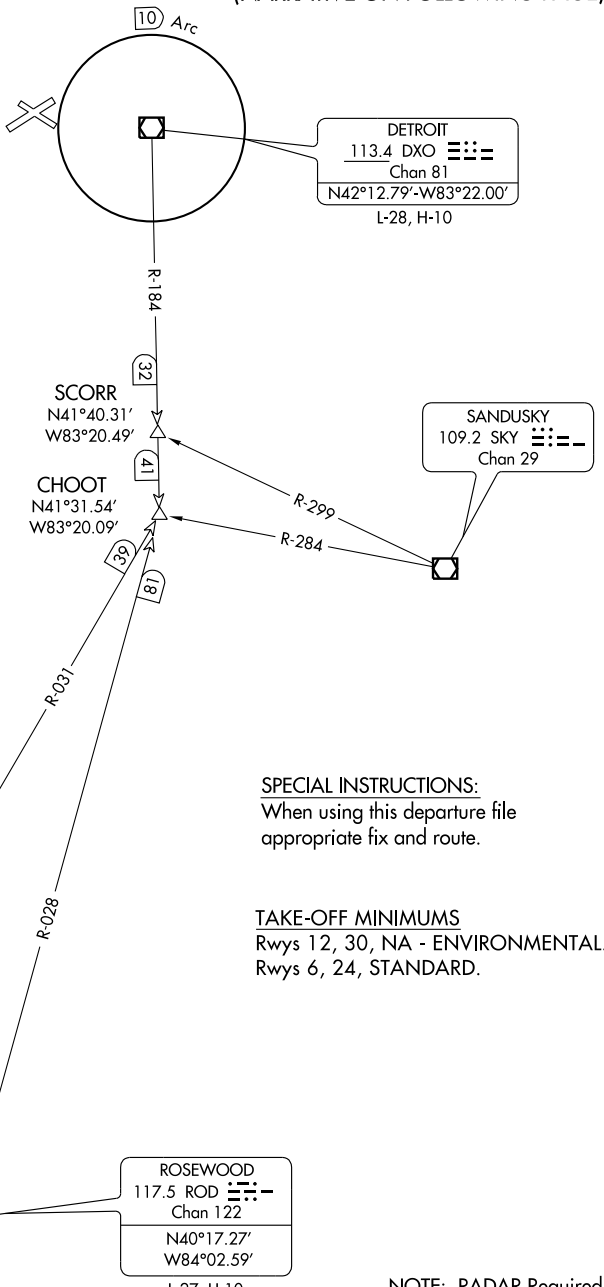
(ROD2.ROD) 07354

ROSEWOOD TWO DEPARTURE SL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN

(NARRATIVE ON FOLLOWING PAGE)

ATIS 134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
When using this departure file appropriate fix and route.

TAKE-OFF MINIMUMS
Rwys 12, 30, NA - ENVIRONMENTAL.
Rwys 6, 24, STANDARD.

NOTE: Chart not to scale.

NOTE: RADAR Required.

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 6: Multiple trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL. Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL. Multiple trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL. Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.

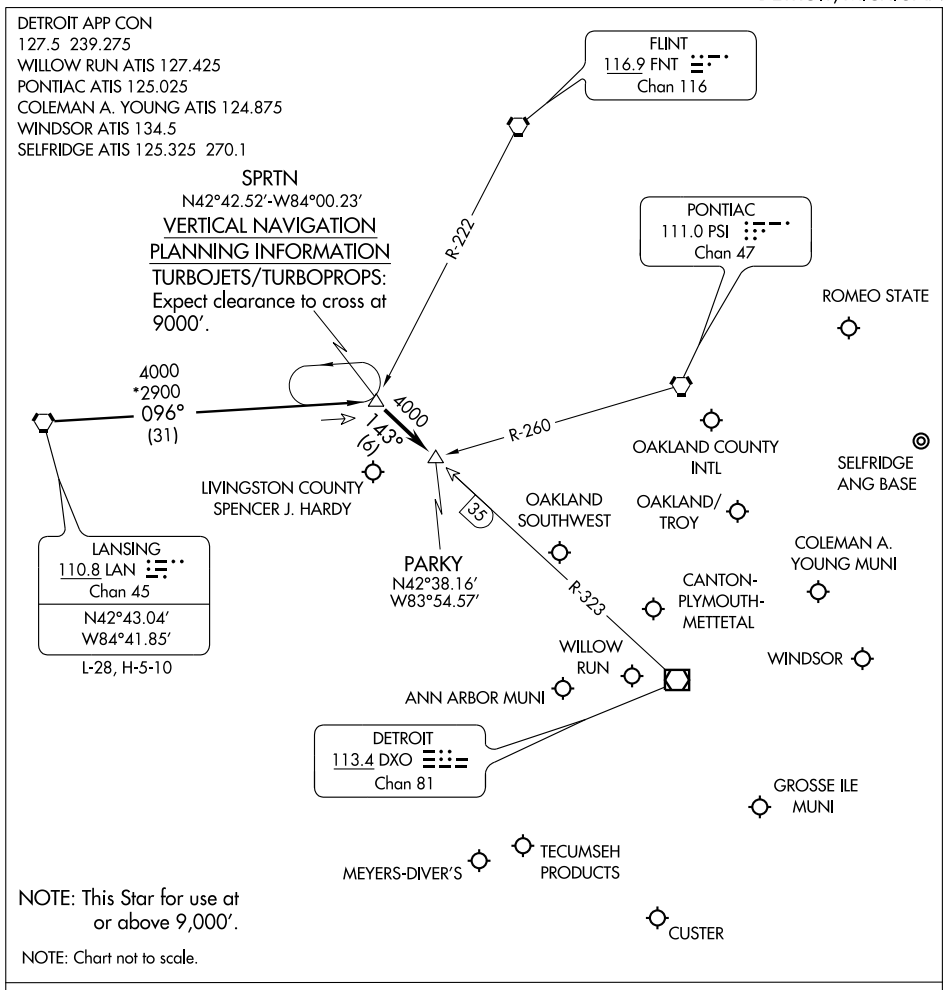
Rwy 24: Multiple trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL. Multiple trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL. Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

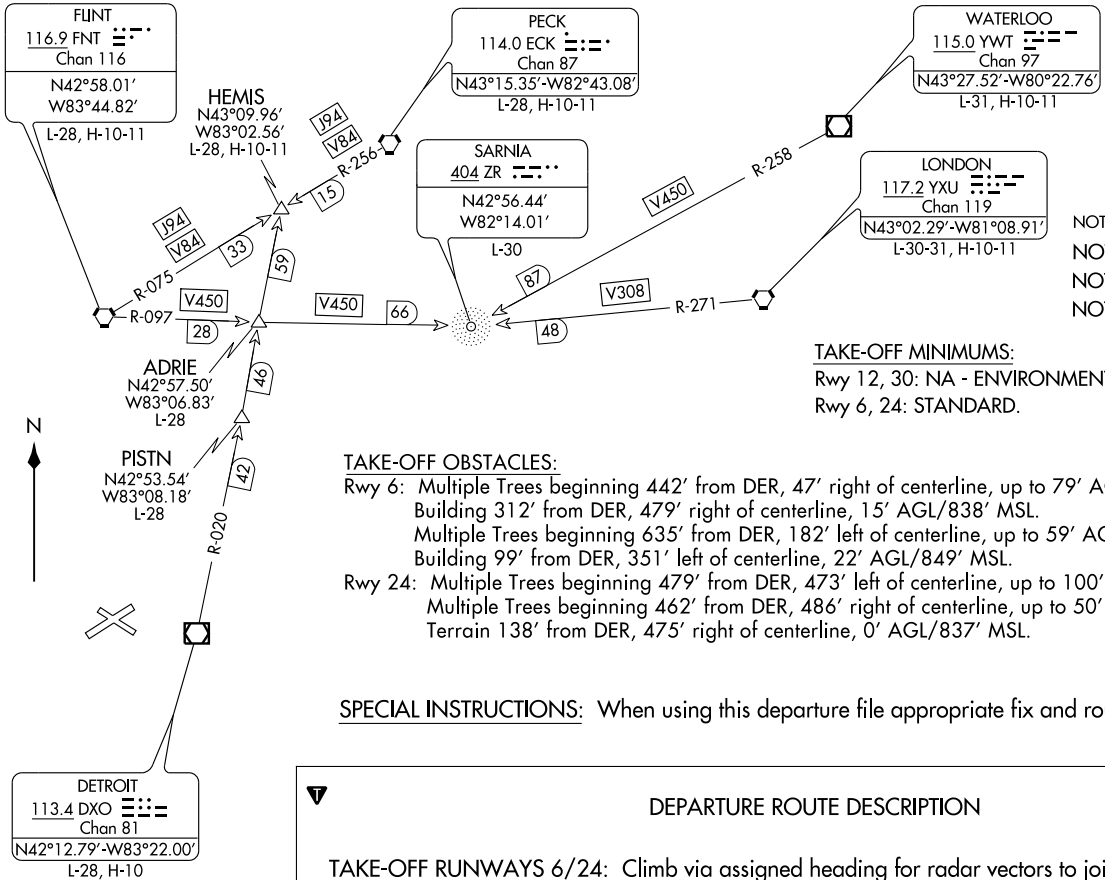
LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

ST. CLAIR THREE DEPARTURE

SL-5506 (FAA)

ATIS 134.55
CLNC DEL 121.6
GND CON 121.6
ANN ARBOR TOWER ★
120.3
DETROIT DEP CON
118.95 239.275
CTAF 120.3



NOTE: Chart not to scale.

NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: JETS ONLY.

TAKE-OFF MINIMUMS:
Rwy 12, 30: NA - ENVIRONMENTAL.
Rwy 6, 24: STANDARD.

TAKE-OFF OBSTACLES:
Rwy 6: Multiple Trees beginning 442′ from DER, 47′ right of centerline, up to 79′ AGL/899′ MSL.
Building 312′ from DER, 479′ right of centerline, 15′ AGL/838′ MSL.
Multiple Trees beginning 635′ from DER, 182′ left of centerline, up to 59′ AGL/887′ MSL.
Building 99′ from DER, 351′ left of centerline, 22′ AGL/849′ MSL.
Rwy 24: Multiple Trees beginning 479′ from DER, 473′ left of centerline, up to 100′ AGL/929′ MSL.
Multiple Trees beginning 462′ from DER, 486′ right of centerline, up to 50′ AGL/885′ MSL.
Terrain 138′ from DER, 475′ right of centerline, 0′ AGL/837′ MSL.

SPECIAL INSTRUCTIONS: When using this departure file appropriate fix and route.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 6/24: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

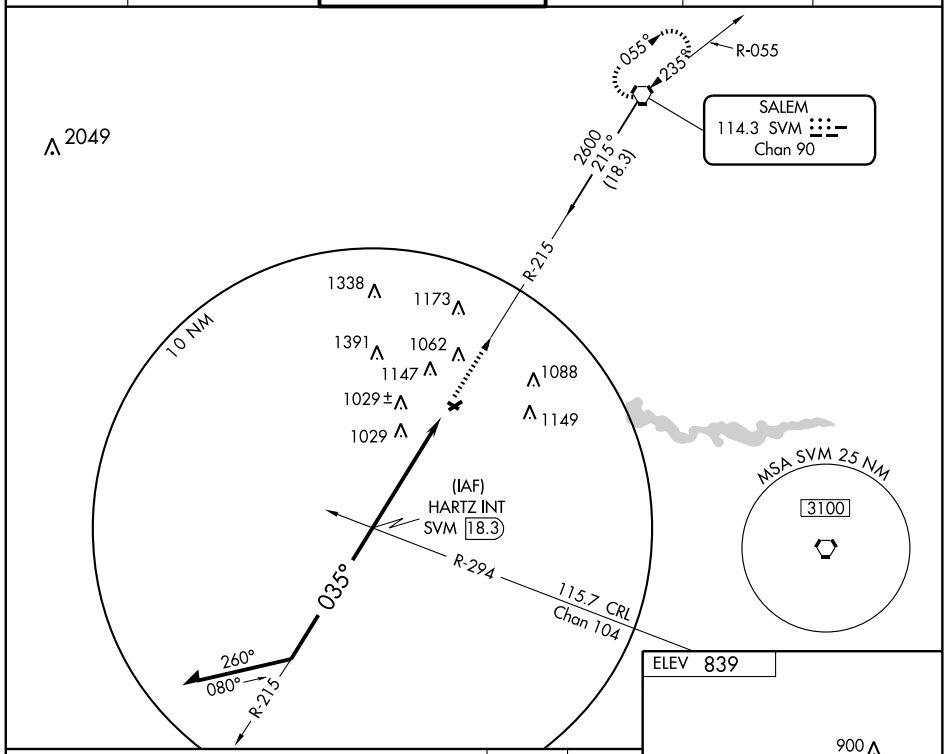
VORTAC SVM 114.3 Chan 90	APP CRS 035°	Rwy ldg 3505 TDZE 830 Apt Elev 839

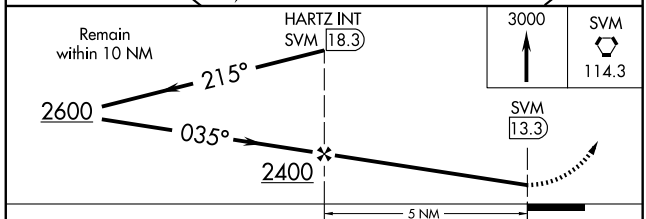
VOR RWY 6
ANN ARBOR MUNI (ARB)

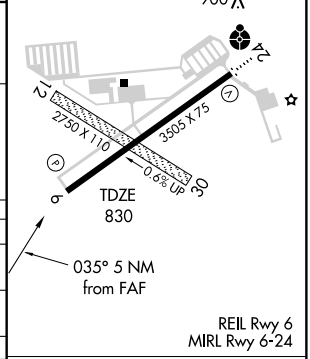
When control tower closed, use Detroit Willow Run altimeter setting.

MISSED APPROACH: Climb to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 363.2	120.3 (CTAF)	121.6	121.6	123.0







CATEGORY	A	B	C	D
S-6	1320-1 490 (500-1)		1320-1¼ 490 (500-1¼)	1320-1½ 490 (500-1½)
CIRCLING	1500-1 661 (700-1)		1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)
WILLOW RUN ALTIMETER SETTING MINIMUMS				
S-6	1340-1 510 (600-1)		1340-1½ 510 (600-1½)	
CIRCLING	1520-1 681 (700-1)		1520-2 681 (700-2)	1520-2¼ 681 (700-2¼)

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1. 14 JAN 2010 to 11 FEB 2010

ANN ARBOR, MICHIGAN

AL-5506 (FAA)

VORTAC SVM	APP CRS	Rwy ldg	3505
114.3	213°	TDZE	830
Chan 90		Apt Elev	839

VOR RWY 24

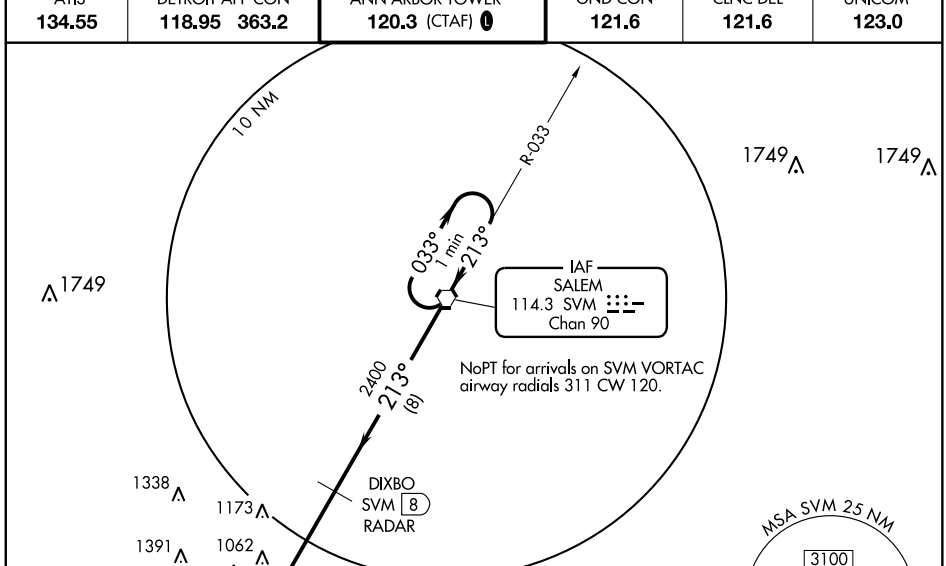
ANN ARBOR MUNI (ARB)

Inoperative table does not apply. When control tower closed, use Detroit Willow Run altimeter setting.

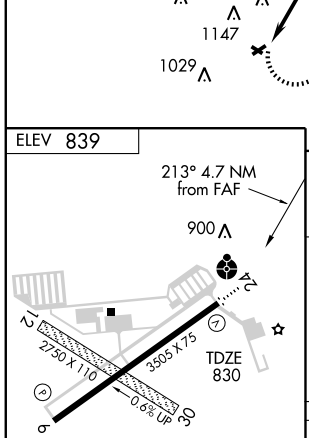
ODALS

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 363.2	120.3 (CTAF)	121.6	121.6	123.0

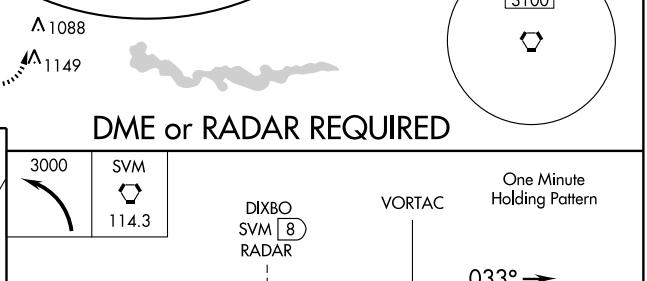


DME or RADAR REQUIRED



MIRL Rwy 6-24
REIL Rwy 6

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-24	1460-1 630 (700-1)		1460-1¾ 630 (700-1¾)	1460-2 630 (700-2)
CIRCLING	1500-1 661 (700-1)		1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)
WILLOW RUN ALTIMETER SETTING MINIMUMS				
S-24	1480-1 650 (700-1)		1480-1¾ 650 (700-1¾)	1480-2 650 (700-2)
CIRCLING	1520-1 681 (700-1)		1520-2 681 (700-2)	1520-2¼ 681 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3195
033°	TDZE	763
	Apt Elev	763

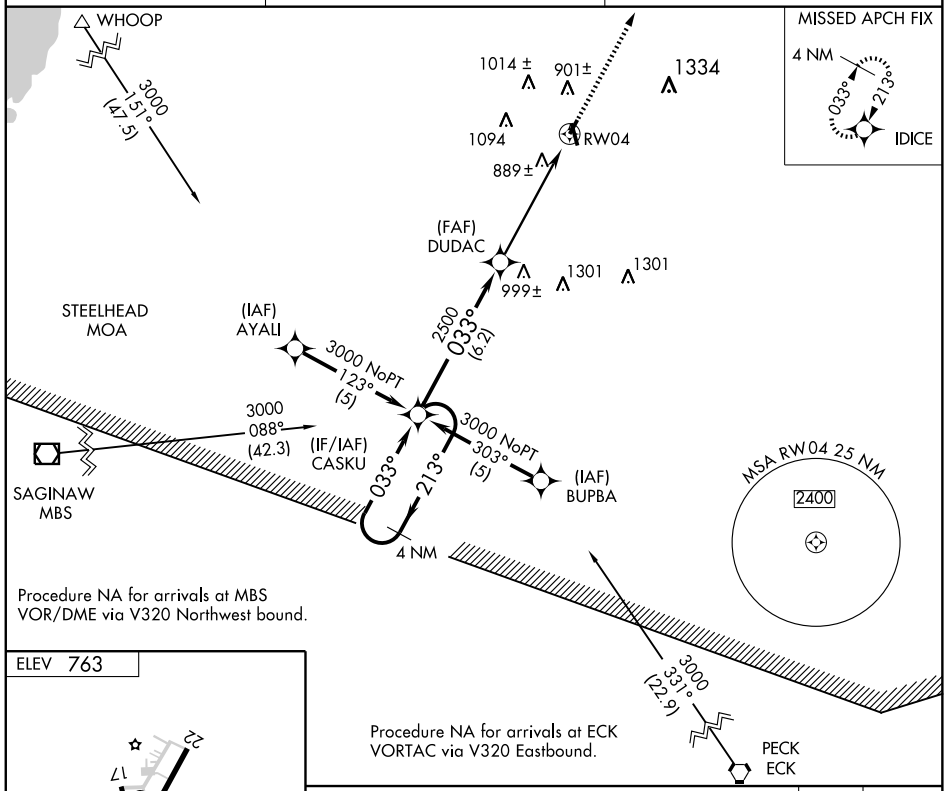
RNAV (GPS) RWY 4

BAD AXE / HURON COUNTY MEMORIAL (BAX)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS INTL altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct IDICE and hold.

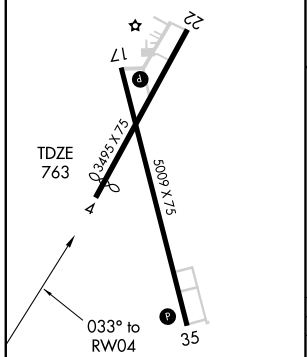
AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L



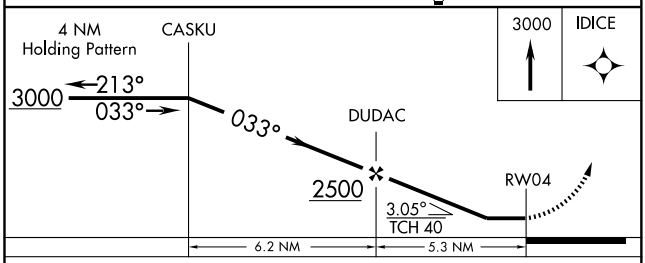
Procedure NA for arrivals at MBS VOR/DME via V320 Northwest bound.

Procedure NA for arrivals at ECK VORTAC via V320 Eastbound.

ELEV 763



REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L



CATEGORY	A	B	C	D
LNAV MDA	1140-1 377 (400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 69205 W17A	APP CRS 170°	Rwy ldg 5009 TDZE 763 Apt Elev 763

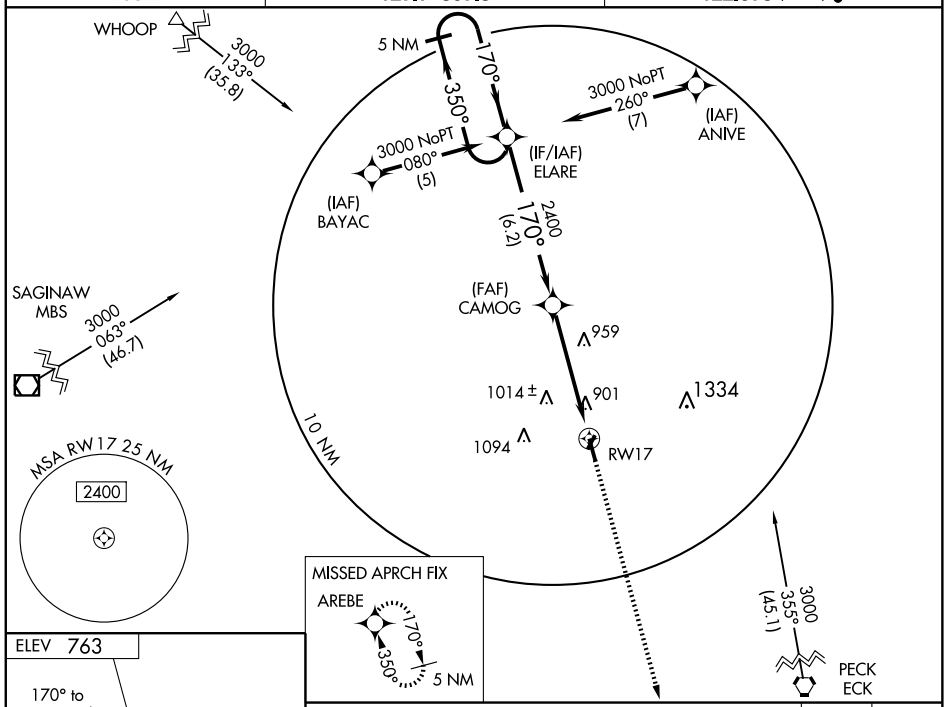
RNAV (GPS) RWY 17

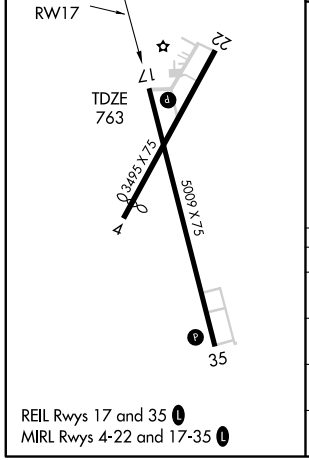
BAD AXE / HURON COUNTY MEMORIAL (BAX)

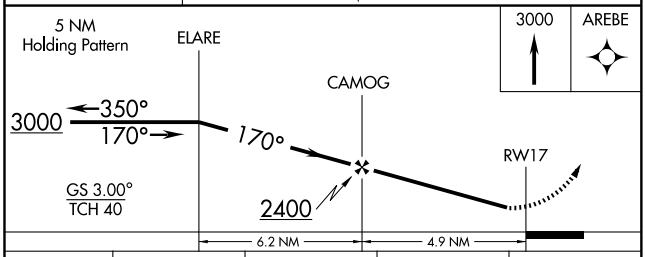
When VGSI inop, procedure NA at night. DME/DME RNP-0.3 NA. Baro-VNAV NA when using Saginaw Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Visibility reduction by helicopters NA. If local altimeter setting not received, use Saginaw Intl altimeter setting and increase all DAs 129 feet and all MDAs 140 feet.

MISSED APPROACH: Climb to 3000 direct AREBE and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1075-1 312 (400-1)			NA
LNAV/ VNAV DA	1352-2 589 (600-2)			NA
LNAV MDA	1220-1 457 (500-1)		1220-1¼ 457 (500-1¼)	NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3495
213°	TDZE	763
	Apt Elev	763

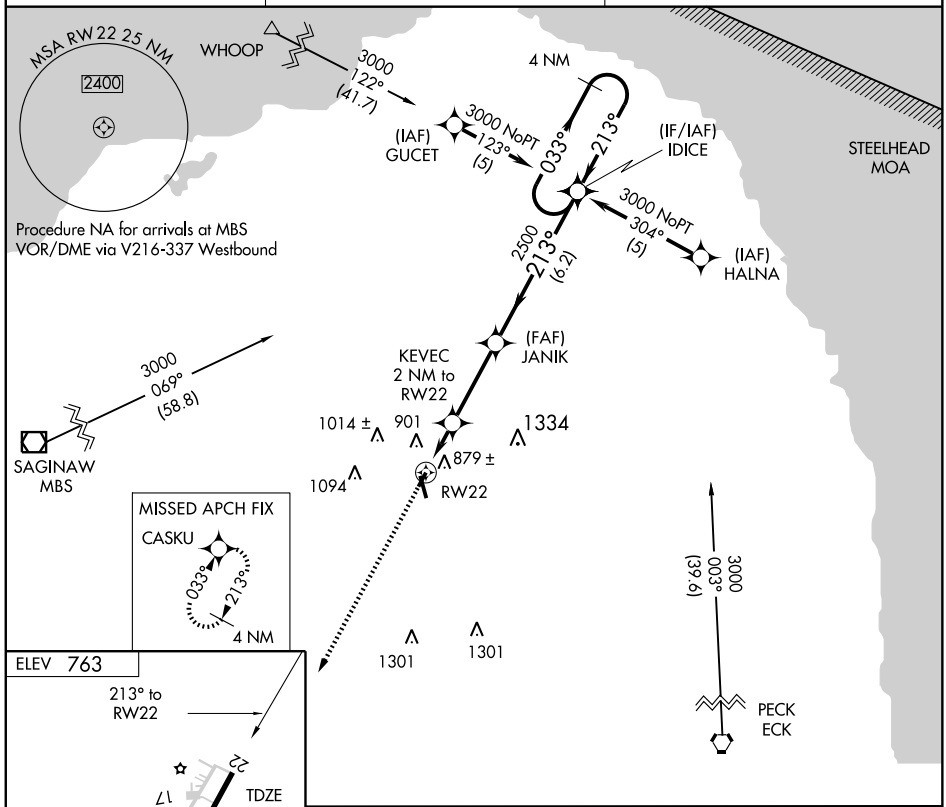
RNAV (GPS) RWY 22

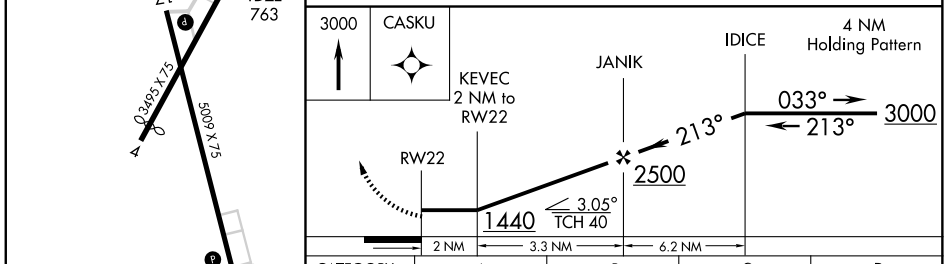
BAD AXE / HURON COUNTY MEMORIAL (BAX)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct CASKU and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1140-1 377(400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 62805 W35A	APP CRS 350°	Rwy ldg 5009 TDZE 756 Apt Elev 763

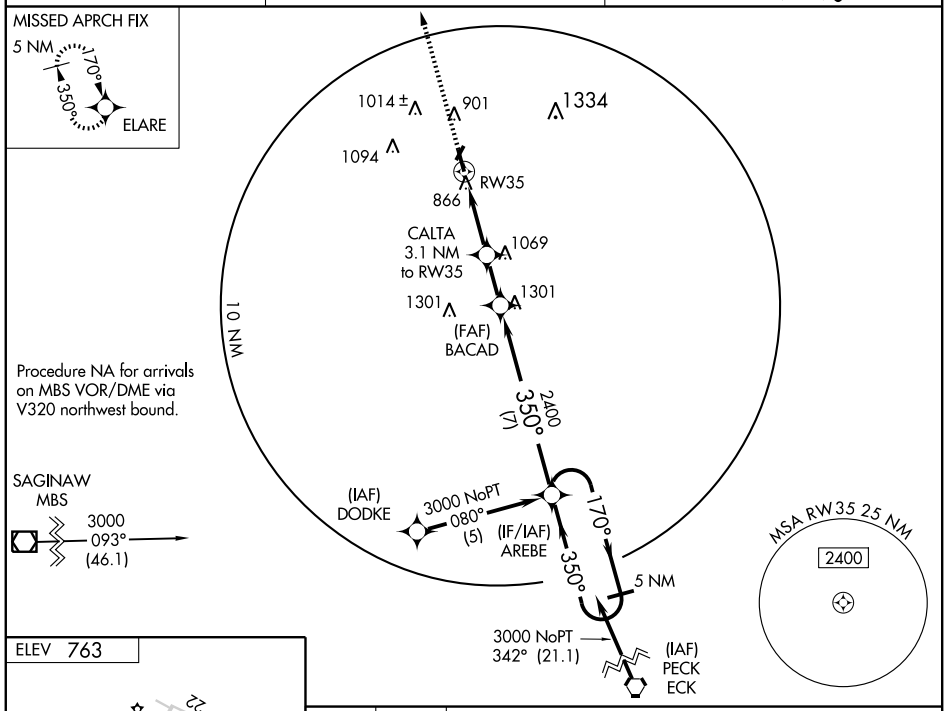
RNAV (GPS) RWY 35

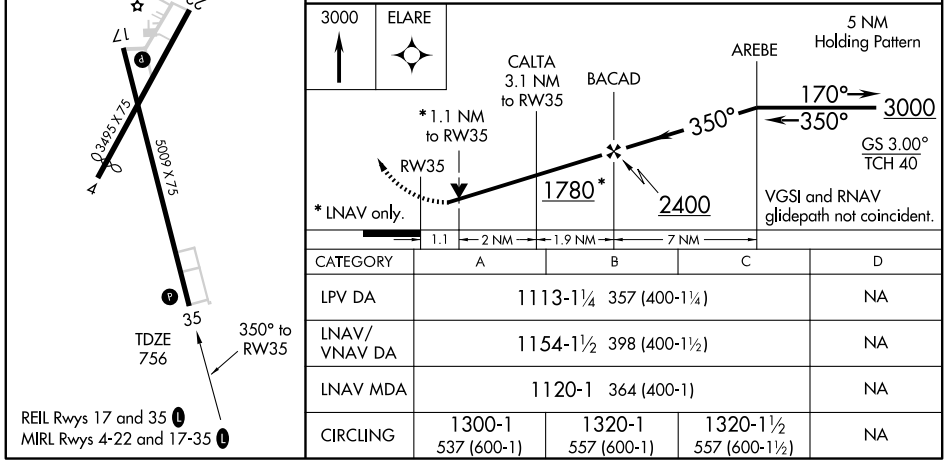
BAD AXE / HURON COUNTY MEMORIAL (BAX)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). VDP and Baro/VNAV NA when using Saginaw Intl altimeter setting. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA. If local altimeter setting not received, use Saginaw Intl altimeter setting and increase all DA's 129 feet and all MDAs 140 feet.

MISSED APPROACH: Climb to 3000 direct ELARE and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1113-1¼ 357 (400-1¼)			NA
LNAV/ VNAV DA	1154-1½ 398 (400-1½)			NA
LNAV MDA	1120-1 364 (400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME BAX 108.2 Chan 19	APP CRS 039°	Rwy ldg 3195 TDZE 763 Apt Elev 763

VOR RWY 4

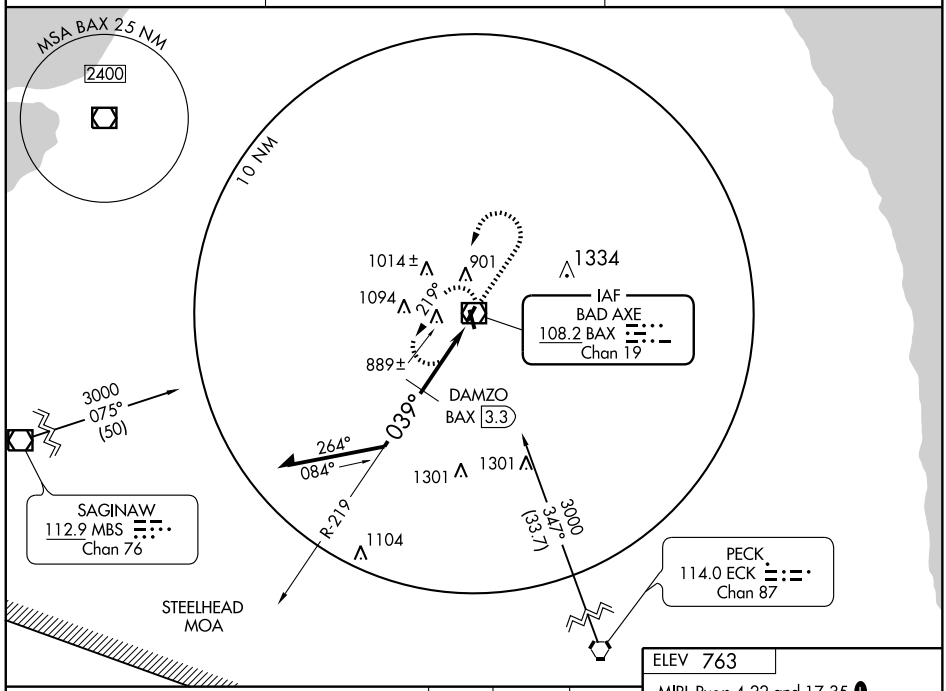
BAD AXE / HURON COUNTY MEMORIAL (BAX)

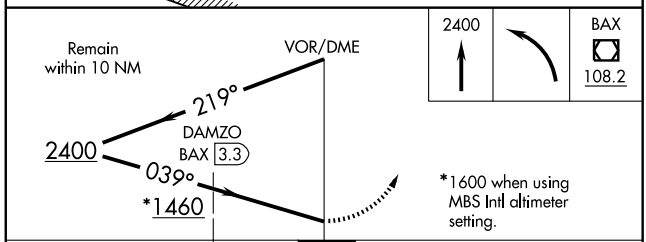
Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat B visibility ¼mile, Cat C visibility ½ mile, and DAMZO fix minimums visibility Cat C ½mile.

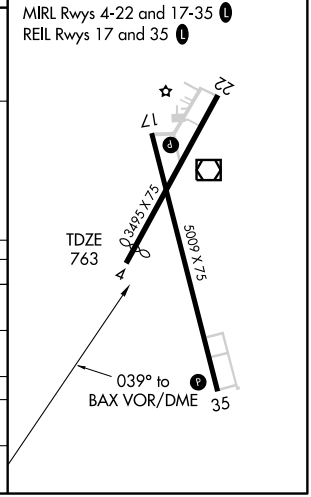
NA

MISSED APPROACH: Climb to 2400 then left turn direct BAX VOR/DME and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L







CATEGORY	A	B	C	D
S-4	1460-1 697 (700-1)		1460-2 697 (700-2)	NA
CIRCLING	1460-1 697 (700-1)		1460-2 697 (700-2)	NA
DAMZO FIX MINIMUMS				
S-4	1140-1 377 (400-1)			NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME BAX 108.2 Chan 19	APP CRS 207°	Rwy ldg 3495 TDZE 763 Apt Elev 763

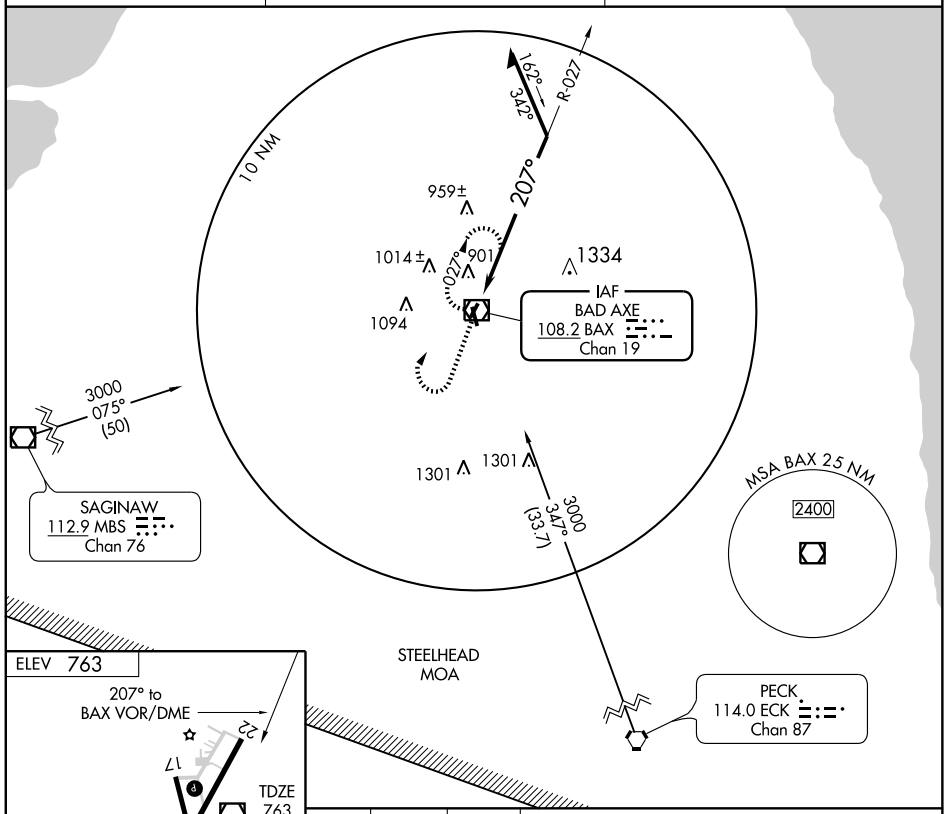
VOR RWY 22

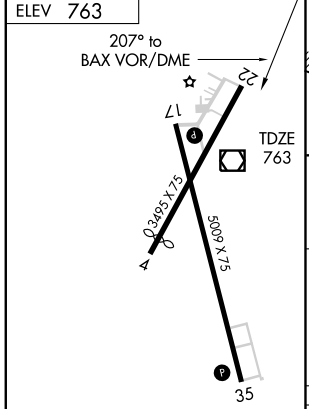
BAD AXE / HURON COUNTY MEMORIAL (BAX)

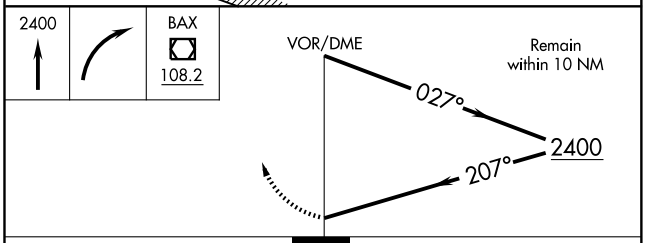
Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDAs 140 feet, and Cat C visibility ½ mile.

MISSED APPROACH: Climb to 2400 then right turn direct BAX VOR/DME and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF) L







CATEGORY	A	B	C	D
S-22	1300-1 537 (600-1)		1300-1½ 537 (600-1½)	NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME BAX 108.2 Chan 19	APP CRS 358°	Rwy ldg 5009 TDZE 756 Apt Elev 763

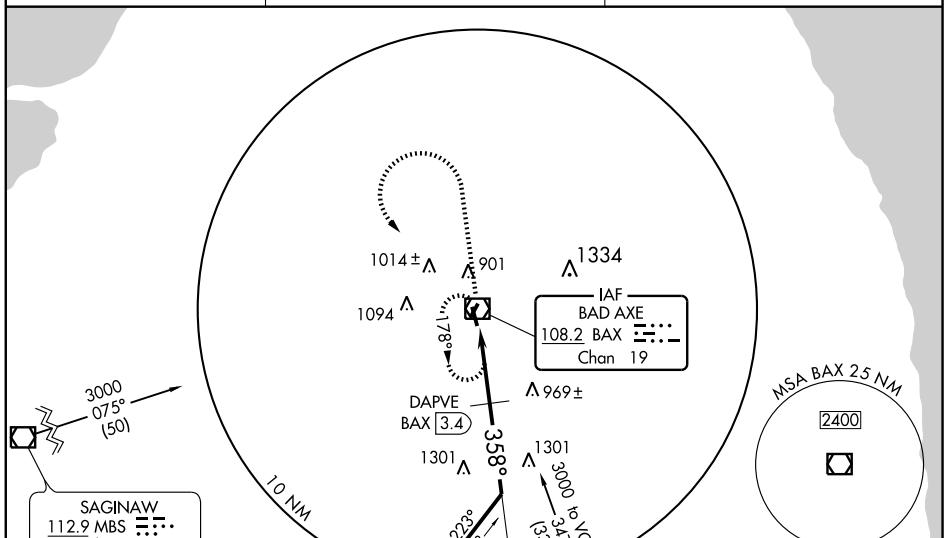
VOR RWY 35

BAD AXE / HURON COUNTY MEMORIAL (BAX)

If local altimeter setting not received, use Saginaw Intl altimeter setting and increase all MDAs 140 feet.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2400 then left turn direct BAX VOR/DME and hold.

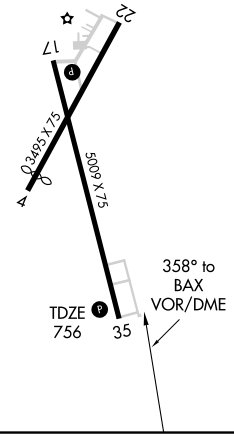
AWOS-3	CLEVELAND CENTER	UNICOM
108.2	127.7 307.8	122.975 (CTAF)

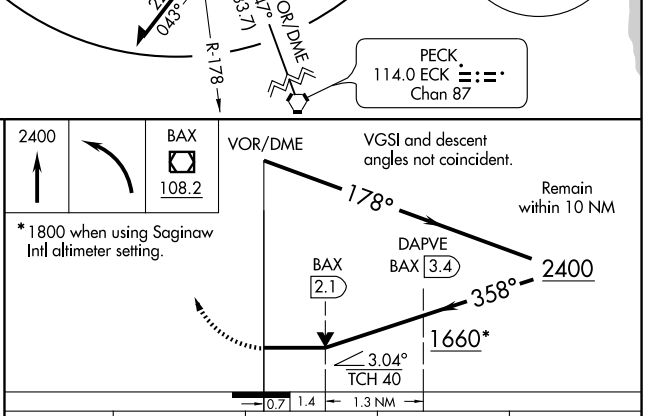


ELEV 763

MIRL Rwys 4-22 and 17-35

REIL Rwys 17 and 35





*1800 when using Saginaw Intl altimeter setting.

CATEGORY	A	B	C	D
S-35	1660-1¼ 904 (900-1¼)		1660-2¾ 904 (900-2¾)	NA
CIRCLING	1660-1¼ 897 (900-1¼)		1660-2¾ 897 (900-2¾)	NA
DAPVE FIX MINIMUMS				
S-35	1220-1 464 (500-1)		1220-1¼ 464 (500-1¼)	NA
CIRCLING	1300-1 537 (600-1)	1320-1 557 (600-1)	1320-1½ 557 (600-1½)	NA

VOR/DME HIC 117.6 Chan 123	APP CRS 345°	Rwy ldg N/A TDZE N/A Apt Elev 828

VOR/DME or GPS-A

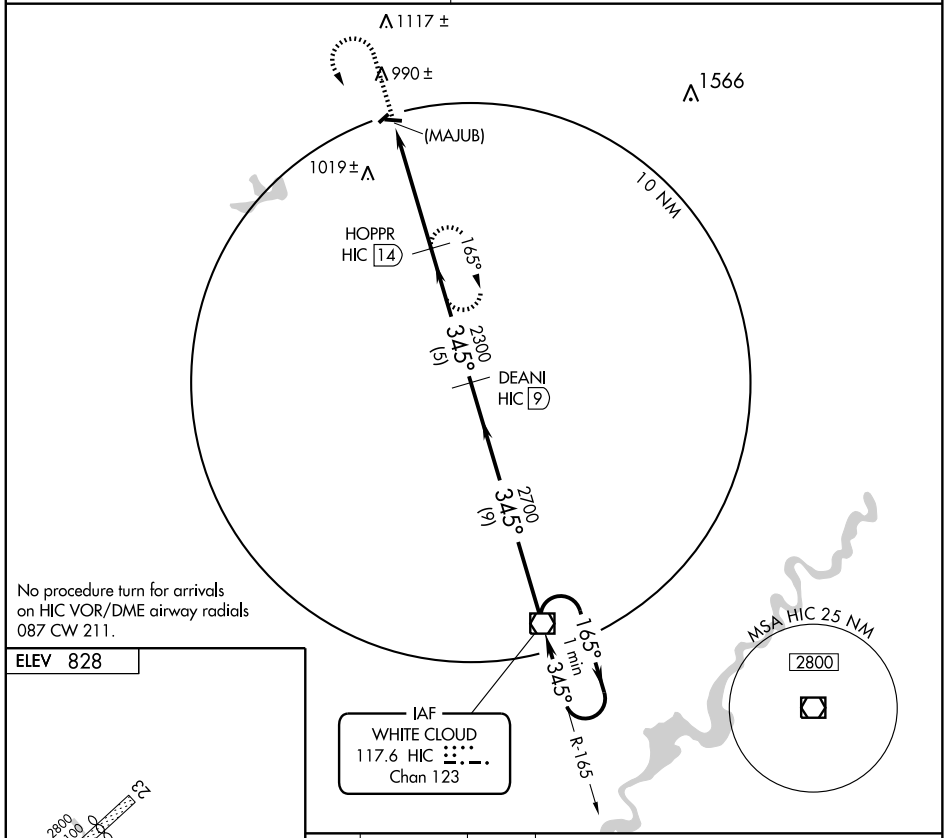
BALDWIN MUNI (7D3)

Use Manistee altimeter setting.
Procedure not authorized at night.

NA

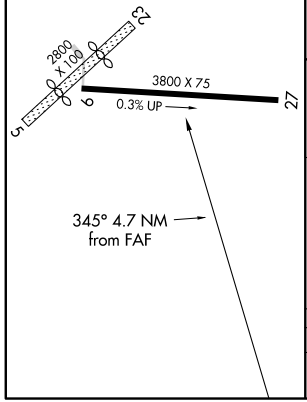
MISSED APPROACH: Climb to 2600, then left turn via the HIC VOR/DME R-345 to HOPPR/14 DME and hold.

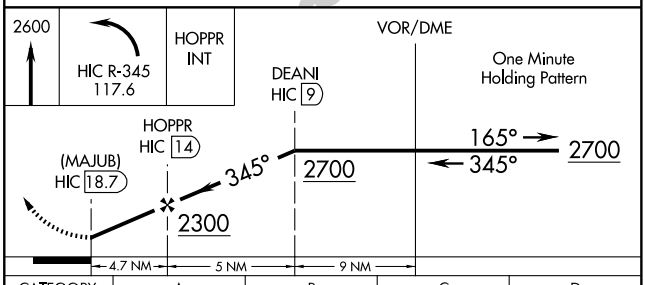
MINNEAPOLIS CENTER	CTAF
120.85 322.35	122.9



No procedure turn for arrivals on HIC VOR/DME airway radials 087 CW 211.

ELEV 828



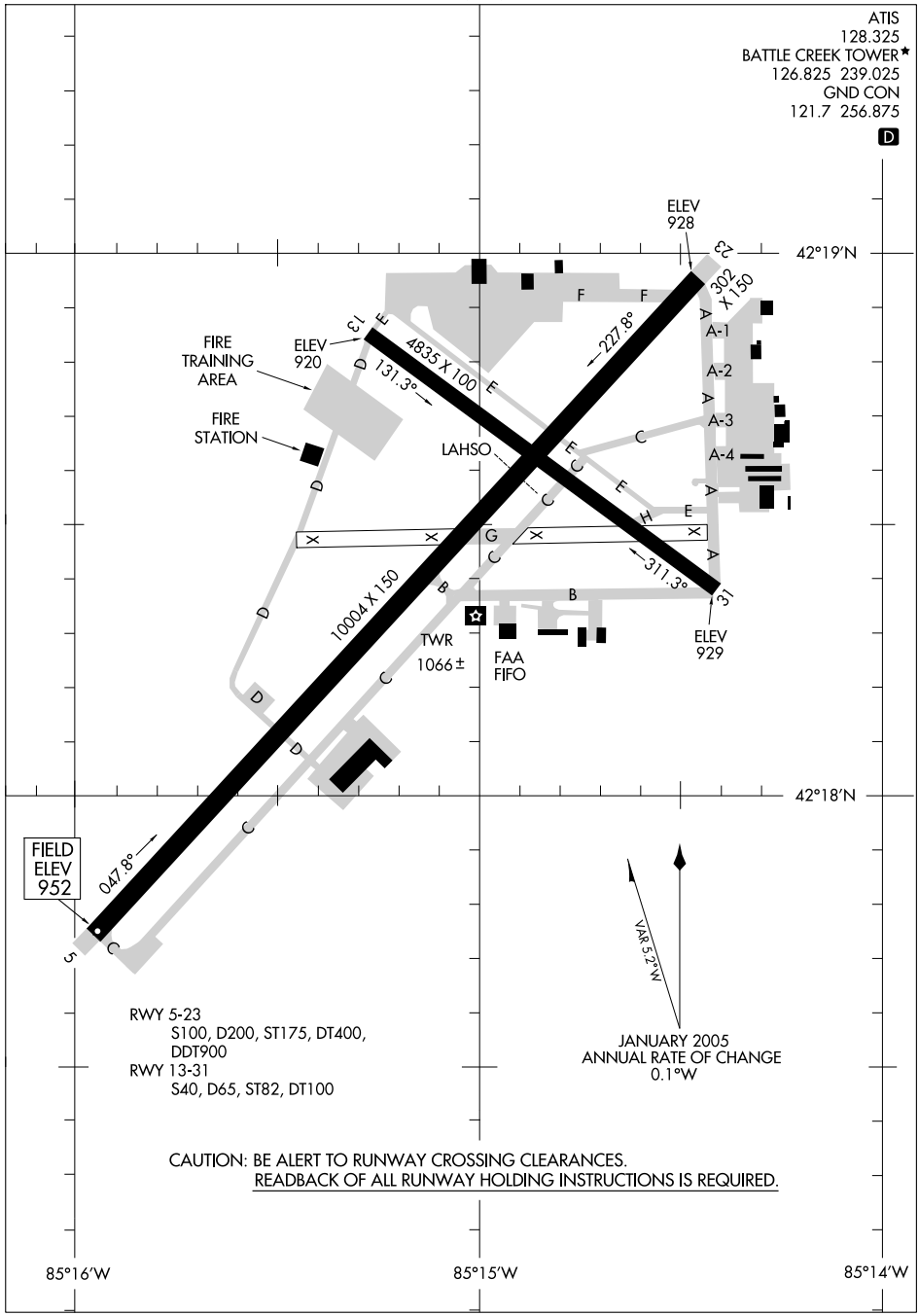


CATEGORY	A	B	C	D
CIRCLING	1400-1 572 (600-1)		1400-1½ 572 (600-1½)	NA

AIRPORT DIAGRAM

AL-41 (FAA)

BATTLE CREEK/ W.K. KELLOGG (BTL)
BATTLE CREEK, MICHIGAN



RWY 5-23
S100, D200, ST175, DT400,
DDT900
RWY 13-31
S40, D65, ST82, DT100

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

EC-1, 14 JAN 2010 to 11 FEB 2010

HI-TACAN RWY 23

VORTAC BTL	APCH CRS	Rwy ldg 10,003
109.4	231°	TDZE 929
Chan 31		Arpt Elev 952

JAL-41 [USAF]

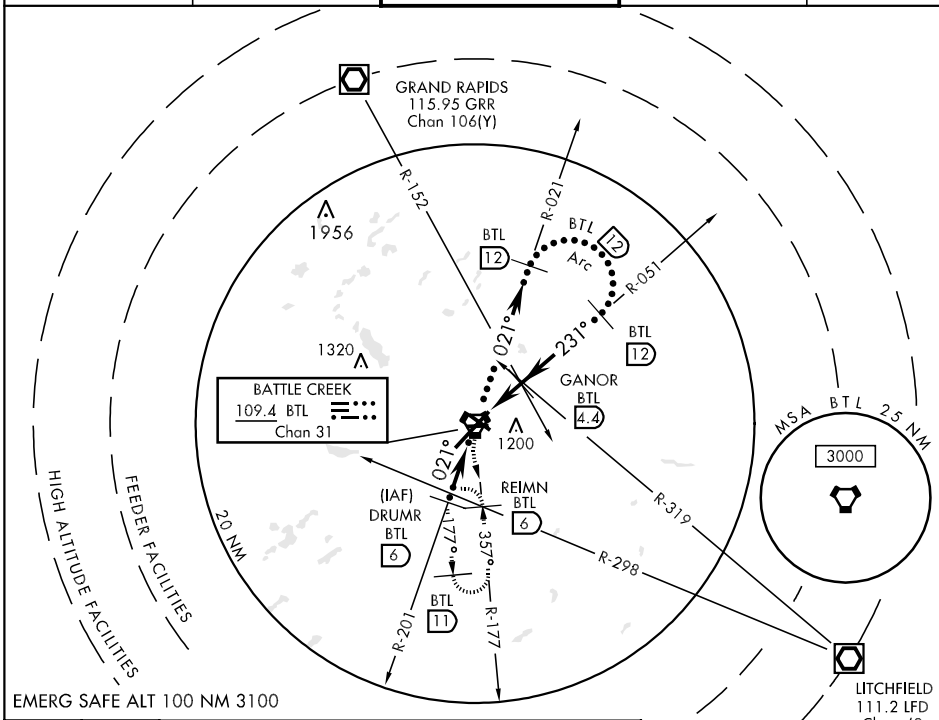
BATTLE CREEK/W. K. KELLOGG (KBTL)

NOTE: When Control Tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.

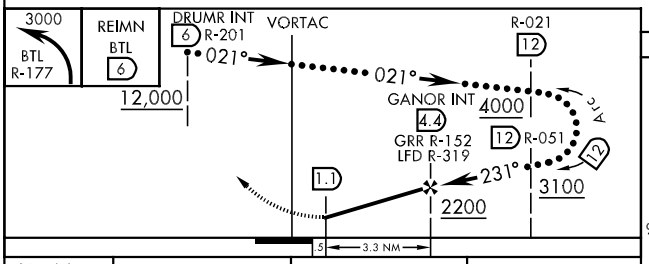
MALSR A5

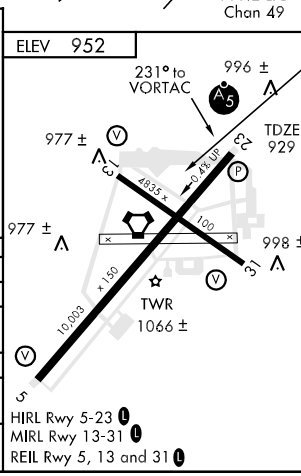
MISSED APPROACH: Climbing left turn to 3000 via BTL VORTAC R-177 to REIMN Int and hold.

ATIS	KALAMAZOO APP CON	BATTLE CREEK TOWER ★	GND CON	ASR
128.325	119.2 340.9	126.825 (CTAF) L 239.025	121.7 256.875	



EMERG SAFE ALT 100 NM 3100





CATEGORY	C	D	E
S-23	1380/40 451(500-¾)	1380/50 451 (500-1)	
CIRCLING	1480-1½ 528 (600-1½)	1520-2 568 (600-2)	1740-2¾ 788 (800-2¾)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS			
S-23	1540-1¼ 611 (700-1¼)	1540-1½ 611 (700-1½)	1540-1¾ 611 (700-1¾)
CIRCLING	1640-2 688 (700-2)	1680-2¼ 728 (800-2¼)	1900-3 948 (1000-3)

LOC I-BTL	APP CRS	Rwy ldg	10003
110.5	227°	TDZE	929
		Apt Elev	952

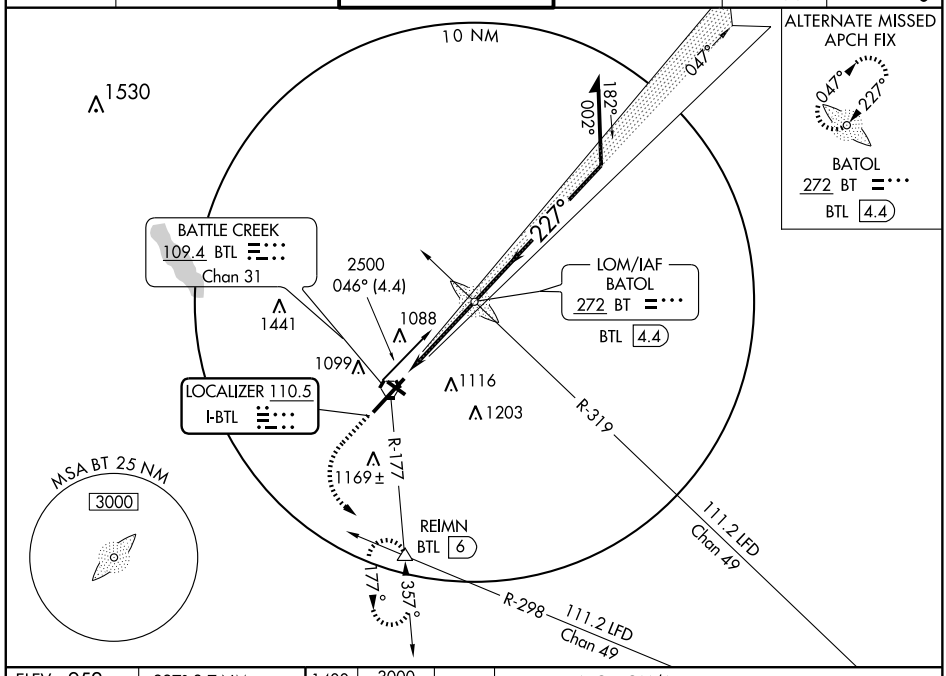
ILS or LOC RWY 23

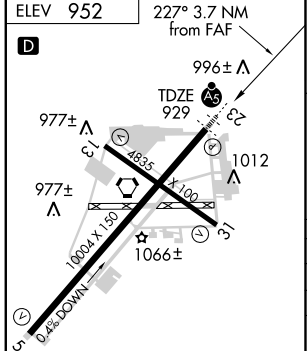
BATTLE CREEK / W.K. KELLOGG (BTL)

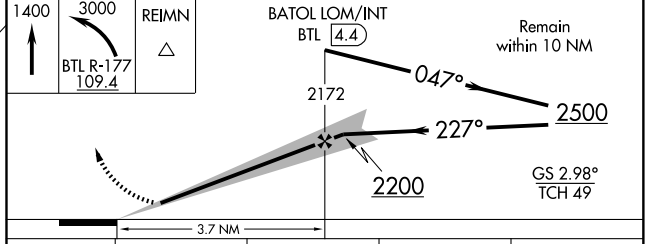
ASR: When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.
* RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR A5: MISSED APPROACH: Climb to 1400 then climbing left turn to 3000 via BTL R-177 to REIMN Int/BTL 6 DME and hold.

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L







HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

FAF to MAP 3.7 NM					
Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14

CATEGORY	A	B	C	D
S-ILS 23	*1129/24 200 (200-½)			
S-LOC 23	1340/24 411 (400-½)		1340/40 411 (400-¾)	
CIRCLING	1420-1 468 (500-1)	1440-1 488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-ILS 23	1289-¾ 360 (400-¾)			
S-LOC 23	1500-¾ 571 (600-¾)		1500-1 571 (600-1)	1500-1¼ 571 (600-1¼)
CIRCLING	1580-1 628 (700-1)	1600-1 648 (700-1)	1640-2 688 (700-2)	1680-2¼ 728 (800-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM BT	APP CRS	Rwy ldg	10003
272	227°	TDZE	929
		Apt Elev	952

NDB RWY 23

BATTLE CREEK / W.K. KELLOGG (BTL)

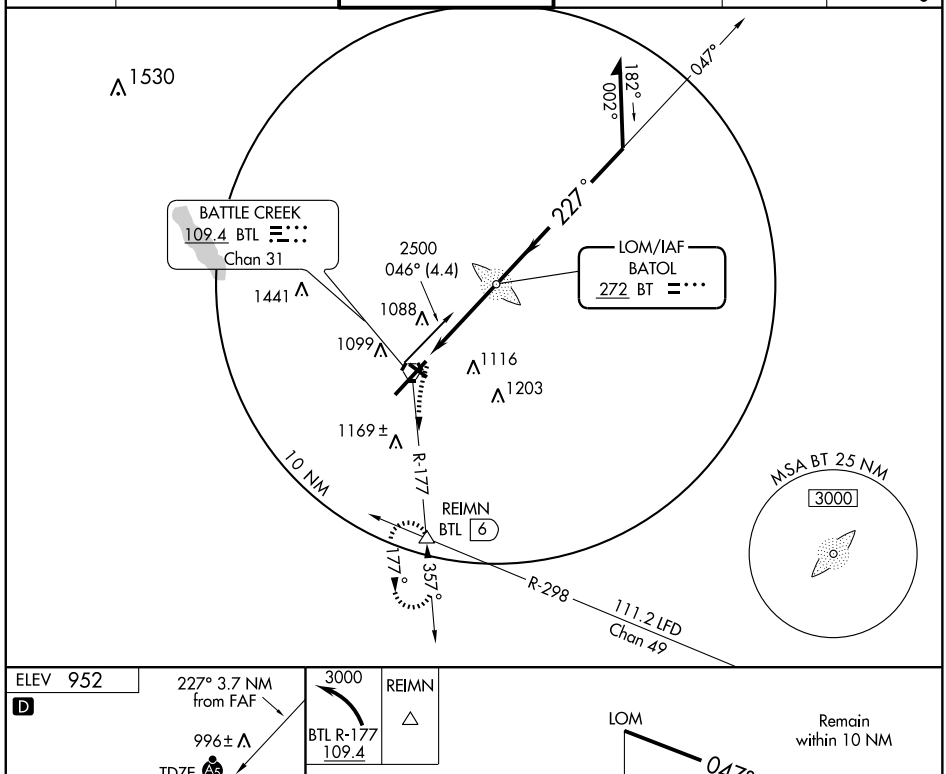
NA ASR

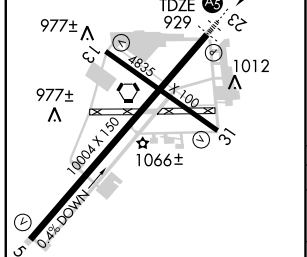
When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.

MALSR

MISSED APPROACH: Climbing left turn to 3000 via BTL R-177 to REIMN Int/BTL 6 DME and hold.

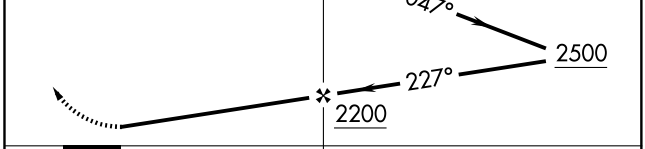
ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L





HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

FAF to MAP 3.7 NM					
Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14



CATEGORY	A	B	C	D
S-23	1440/40	511 (500-¾)	1440/50 511 (500-1)	1440/60 511 (500-1¼)
CIRCLING	1440-1	488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-23	1600-¾	671 (700-¾)	1600-1½ 671 (700-1½)	1600-2 671 (700-2)
CIRCLING	1600-1	648 (700-1)	1640-2 688 (700-2)	1680-2¼ 728 (800-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 90311 W05A	APP CRS 047°	Rwy ldg 10003 TDZE 952 Apt Elev 952

RNAV (GPS) RWY 5

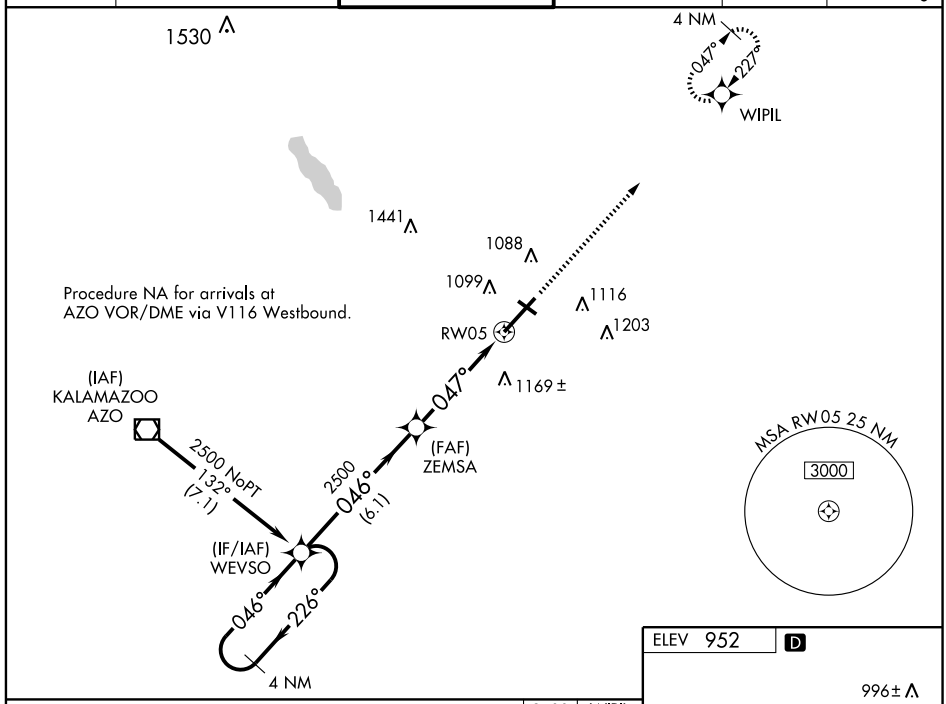
BATTLE CREEK / W.K. KELLOGG (BTL)

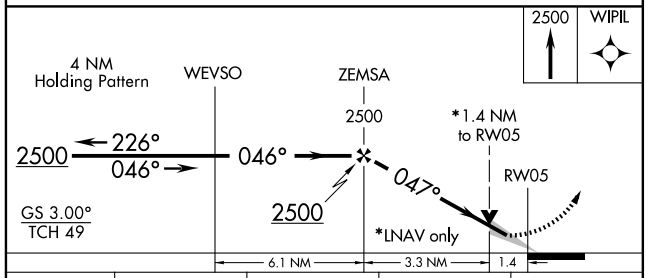
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase LPV DA 107 feet, LNAV/VNAV DA 236 feet, and all MDA 120 feet, increase LPV visibility ½ mile all Cats, and LNAV/VNAV visibility ¾ mile all Cats, LNAV Cat C and D visibility ½ mile, Circling Cat C and D visibility ¼ mile. VDP and Baro-VNAV NA when using Grand Rapids altimeter setting.

ASR

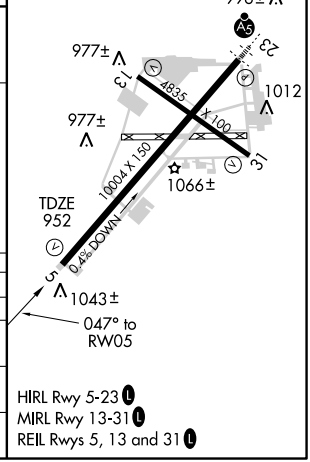
MISSED APPROACH: Climb to 2500 direct WIPIL and hold.

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L





CATEGORY	A	B	C	D
LPV DA	1262-1 310 (400-1)			
LNAV/VNAV DA	1328-1¼ 376 (400-1¼)			
LNAV MDA	1440-1 488 (500-1)		1440-1¼ 488 (500-1¼)	1440-1½ 488 (500-1½)
CIRCLING	1440-1 488 (500-1)	1500-1 548 (600-1)	1500-1½ 548 (600-1½)	1520-2 568 (600-2)



WAAS CH 56411 W23A	APP CRS 227°	Rwy ldg 10003 TDZE 929 Apt Elev 952

RNAV (GPS) RWY 23

BATTLE CREEK / W.K. KELLOGG (BTL)

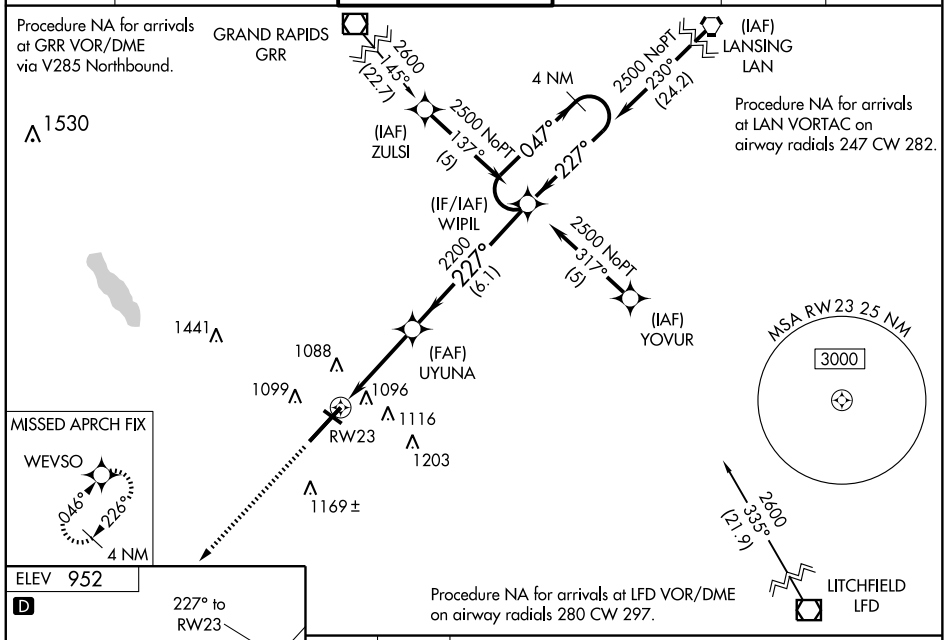
ASR

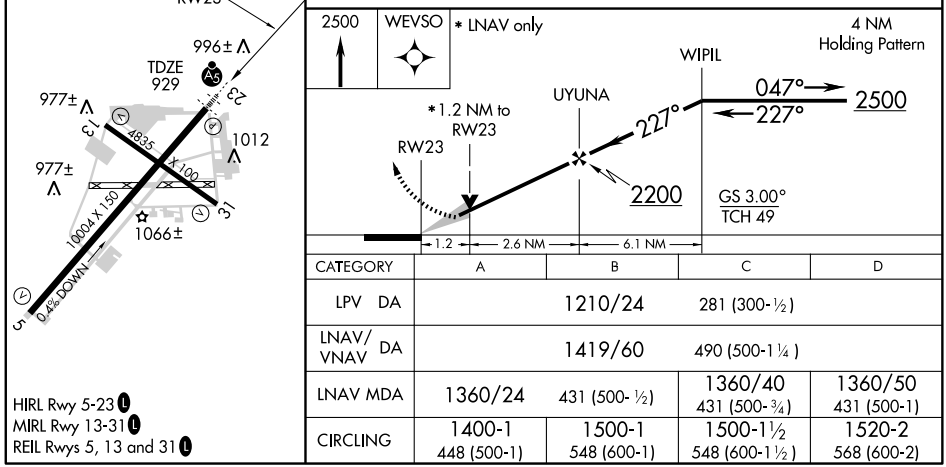
For inoperative MALSR, increase LPV all Cats visibility to RVR 5000. For inoperative MALSR when using Grand Rapids altimeter setting, increase LPV all Cats visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase all DA 107 feet, and all MDA 120 feet. Increase LPV visibility all Cats to RVR 4000, LNAV/VNAV all Cats visibility to 1½ miles, and LNAV Cat C to RVR 5000, Cat D to RVR 6000. Increase Circling visibility Cats C/D ¼ mile. VDP and Baro-VNAV NA when using Grand Rapids altimeter setting.

MALSR

MISSED APPROACH: Climb to 2500 direct WEVSO and hold.

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L





CATEGORY	A	B	C	D
LPV DA	1210/24		281 (300-½)	
LNAV/VNAV DA	1419/60		490 (500-1¼)	
LNAV MDA	1360/24	431 (500-½)	1360/40 431 (500-¾)	1360/50 431 (500-1)
CIRCLING	1400-1 448 (500-1)	1500-1 548 (600-1)	1500-1½ 548 (600-1½)	1520-2 568 (600-2)

HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

VORTAC BTL 109.4 Chan 31	APP CRS 300°	Rwy ldg 4835 TDZE 930 Apt Elev 952

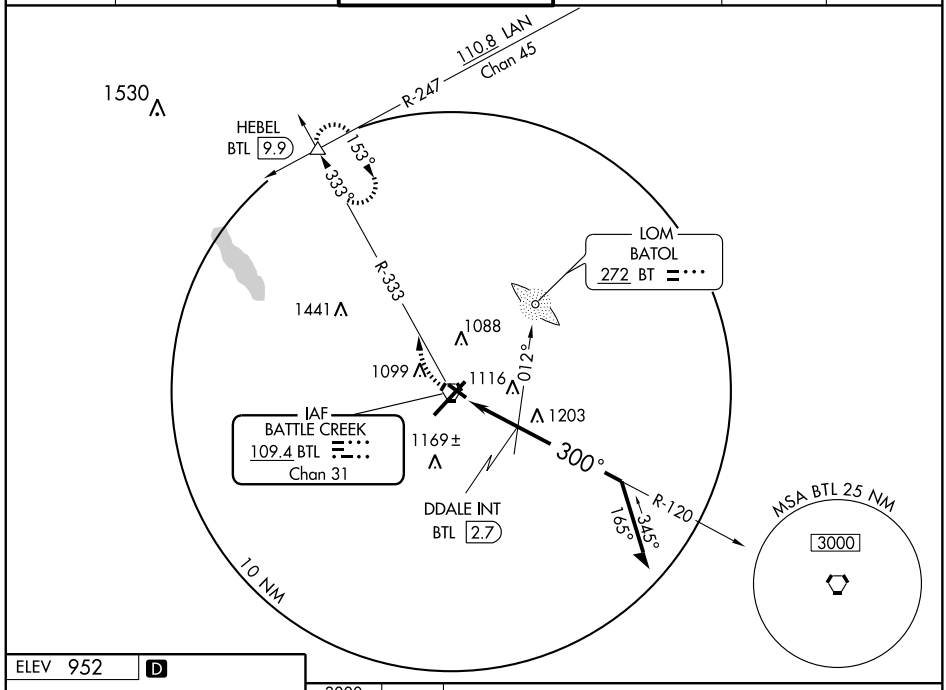
VOR or TACAN or GPS RWY 31

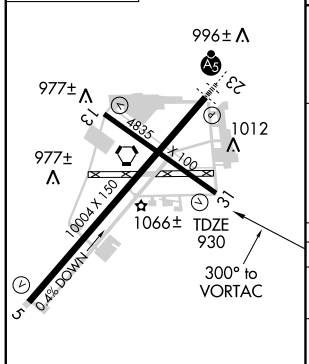
BATTLE CREEK / W.K. KELLOGG (BTL)

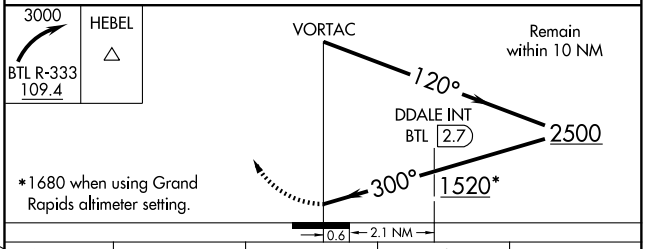
ASR: When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting and increase all MDAs 160 feet and all visibilities ¾ mile. Air carrier landing visibilty reduction for local conditions not authorized.

MISSED APPROACH: Climbing right turn to 3000 via BTL R-333 to HEBEL Int/BTL 9.9 DME and hold.

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L







*1680 when using Grand Rapids altimeter setting.

CATEGORY	A	B	C	D
S-31	1520-1	590 (600-1)	1520-1½ 590 (600-1½)	1520-1¾ 590 (600-1¾)
CIRCLING	1520-1	568 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)
DDALE MINIMUMS				
S-31	1380-1	450 (500-1)	1380-1¼ 450 (500-1¼)	1380-1½ 450 (500-1½)
CIRCLING	1420-1 468 (500-1)	1440-1 488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)

HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC BTL 109.4 Chan 31	APP CRS 040°	Rwy ldg 10003 TDZE 952 Apt Elev 952

VOR or TACAN RWY 5

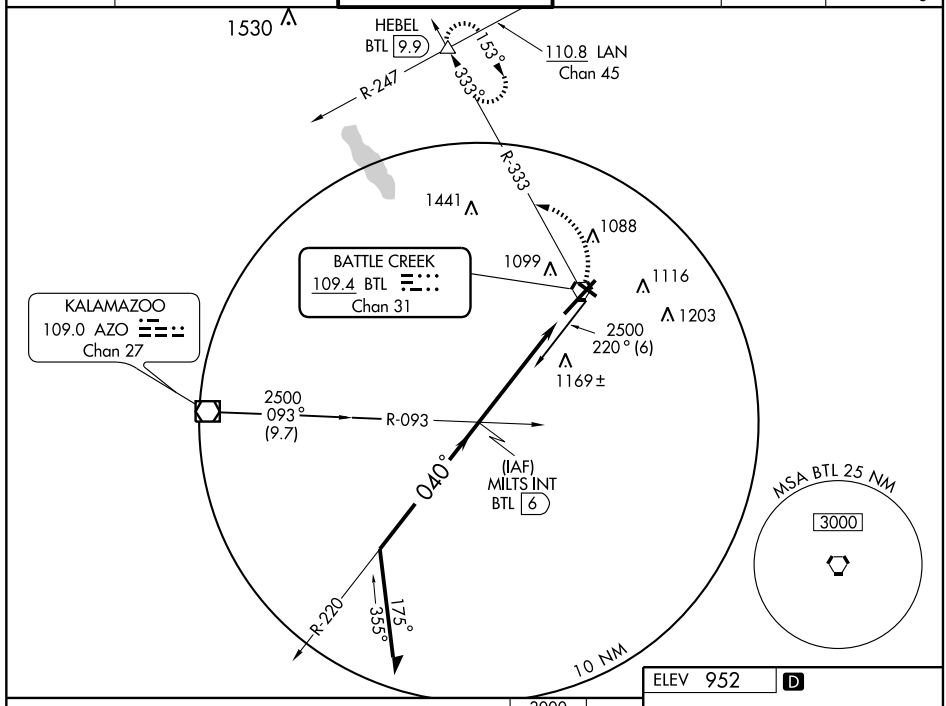
BATTLE CREEK / W.K. KELLOGG (BTL)

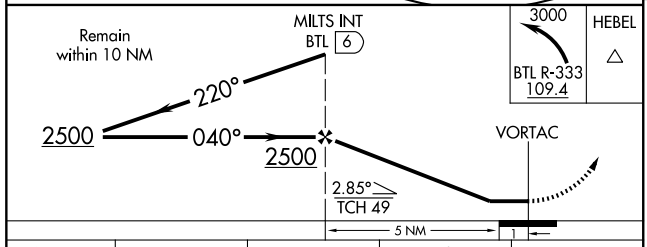
ASR

When control tower closed, except for operators with approved weather reporting service, use Grand Rapids altimeter setting.

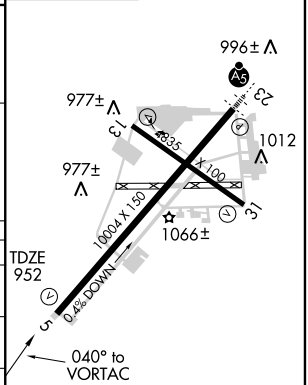
MISSED APPROACH: Climbing left turn to 3000 via BTL R-333 to HEBEL Int/BTL 9.9 DME and hold.

ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L





CATEGORY	A	B	C	D
S-5	1400-1	448 (500-1)	1400-1¼ 448 (500-1¼)	1400-1½ 448 (500-1½)
CIRCLING	1420-1 468 (500-1)	1440-1 488 (500-1)	1480-1½ 528 (600-1½)	1520-2 568 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-5	1560-1	608 (700-1)	1560-1¾ 608 (700-1¾)	1560-2 608 (700-2)
CIRCLING	1580-1 628 (700-1)	1600-1 648 (700-1)	1640-2 688 (700-2)	1680-2¼ 728 (800-2¼)



HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC BTL	APP CRS	Rwy ldg	10003
109.4	231°	TDZE	929
Chan 31		Apt Elev	952

VOR RWY 23

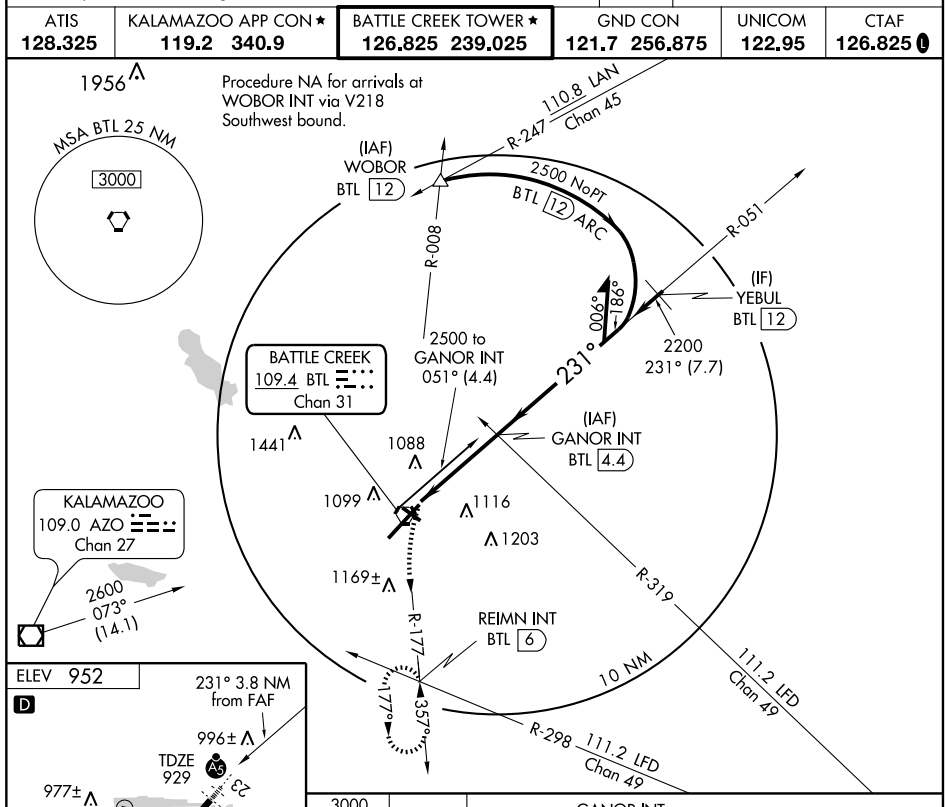
BATTLE CREEK / W.K. KELLOGG (BTL)

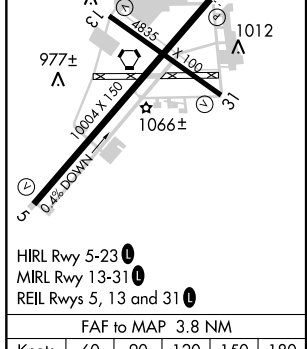
ASR: For inoperative MALSR, increase S-23 Cats A/B visibility to RVR 5000. Visibility reduction by helicopters NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 120 feet, increase Cat C visibility to RVR 5000, Cat D visibility to RVR 6000, and Circling Cat C and D visibility ¼ mile. VDP NA when using Grand Rapids altimeter setting.

MALSR

MISSED APPROACH: Climbing left turn to 3000 via BTL VORTAC R-177 to REIMN INT/6 DME and hold, continue climb-in-hold to 3000.

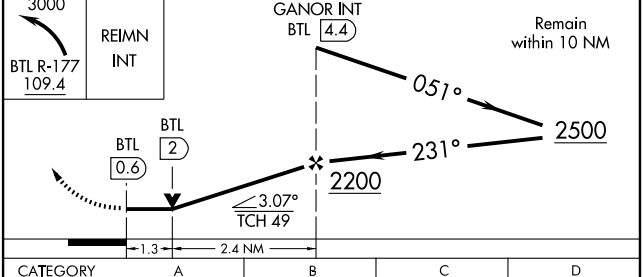
ATIS	KALAMAZOO APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 340.9	126.825 239.025	121.7 256.875	122.95	126.825 L





HIRL Rwy 5-23 L
MIRL Rwy 13-31 L
REIL Rwys 5, 13 and 31 L

FAF to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16



CATEGORY	A	B	C	D
S-23	1400/40 471 (500-¾)			1400/50 471 (500-1)
CIRCLING	1420-1 468 (500-1)	1500-1 548 (600-1)	1500-1½ 548 (600-1½)	1520-2 568 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3798
183°	TDZE	586
	Apt Elev	586

RNAV (GPS) RWY 18

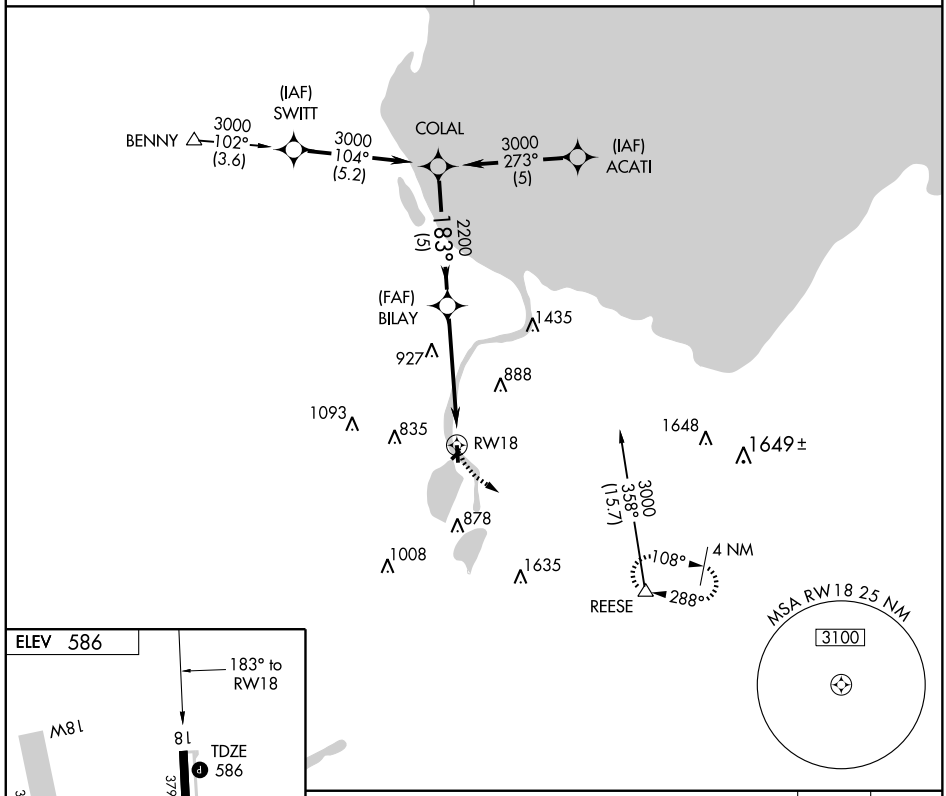
BAY CITY/ JAMES CLEMENTS MUNI (3CM)

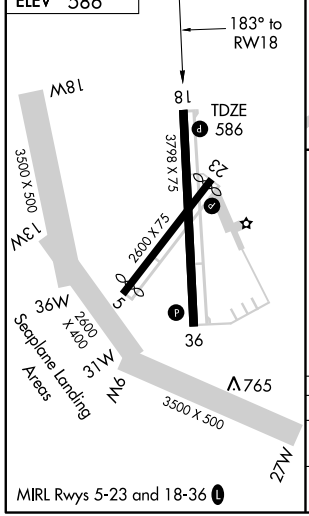
GPS or RNP -0.3 required. DME/DME RNP -0.3 NA.
Use Saginaw altimeter setting.
Straight-in minimums NA at night.
Circling NA southeast of Rwys 23 and 36.

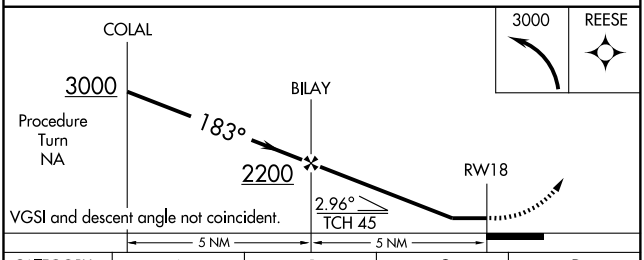
NA

MISSED APPROACH: Climbing left turn to 3000 direct REESE WP and hold.

SAGINAW APP CON ★	UNICOM
120.95 235.625	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1260-1 674 (700-1)		1260-2 674 (700-2)	NA
CIRCLING	1260-1 674 (700-1)		1260-2 674 (700-2)	NA

VOR/DME MBS	APP CRS	Rwy ldg	N/A
112.9	087°	TDZE	N/A
Chan 76		Apt Elev	586

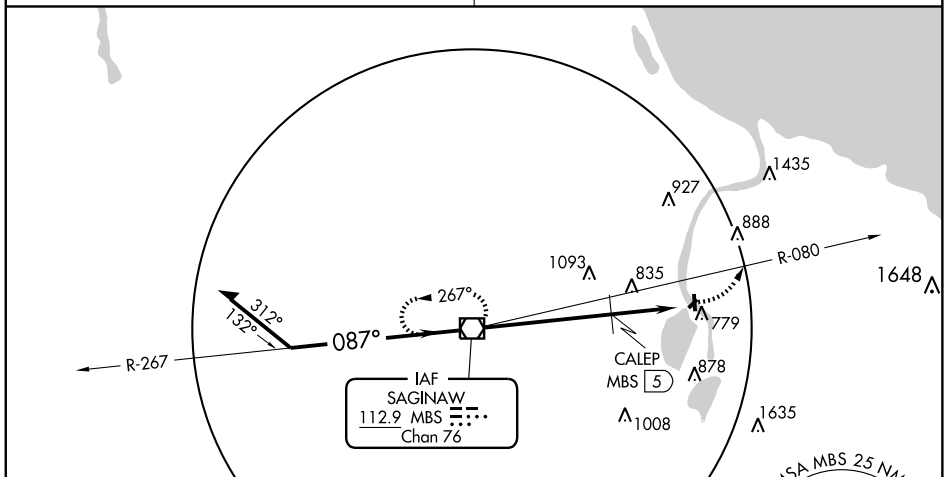
VOR-A

BAY CITY/JAMES CLEMENTS MUNI (3CM)

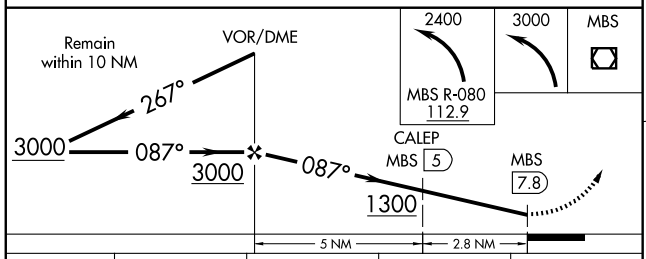
Use Saginaw altimeter setting.
NA Circling not authorized southeast of Rwys 23 and 36.

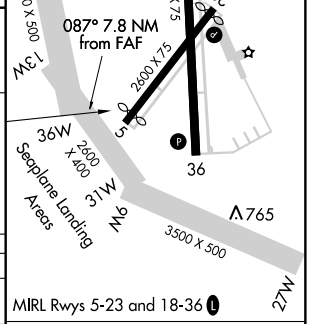
MISSED APPROACH: Climbing left turn to 2400 via MBS R-080 outbound then climbing left turn to 3000 direct MBS VOR/DME and hold.

SAGINAW APP CON ★	UNICOM
120.95 235.625	122.8 (CTAF) L



CAUTION: Tall vessels may be in the approach areas to Rwys 5 and 36.





MIRL Rwys 5-23 and 18-36 L

CATEGORY	A	B	C	D
CIRCLING	1300-1 714 (800-1)		1300-2 714 (800-2)	NA
DME MINIMUMS				
CIRCLING	1120-1 534 (600-1)	1180-1 594 (600-1)	1180-1½ 594 (600-1½)	NA

FAF to MAP 7.8 NM

Knots	60	90	120	150	180
Min:Sec	7:48	5:12	3:54	3:07	2:36

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB SJX 382	APP CRS 280°	Rwy ldg 4300 TDZE 669 Apt Elev 669

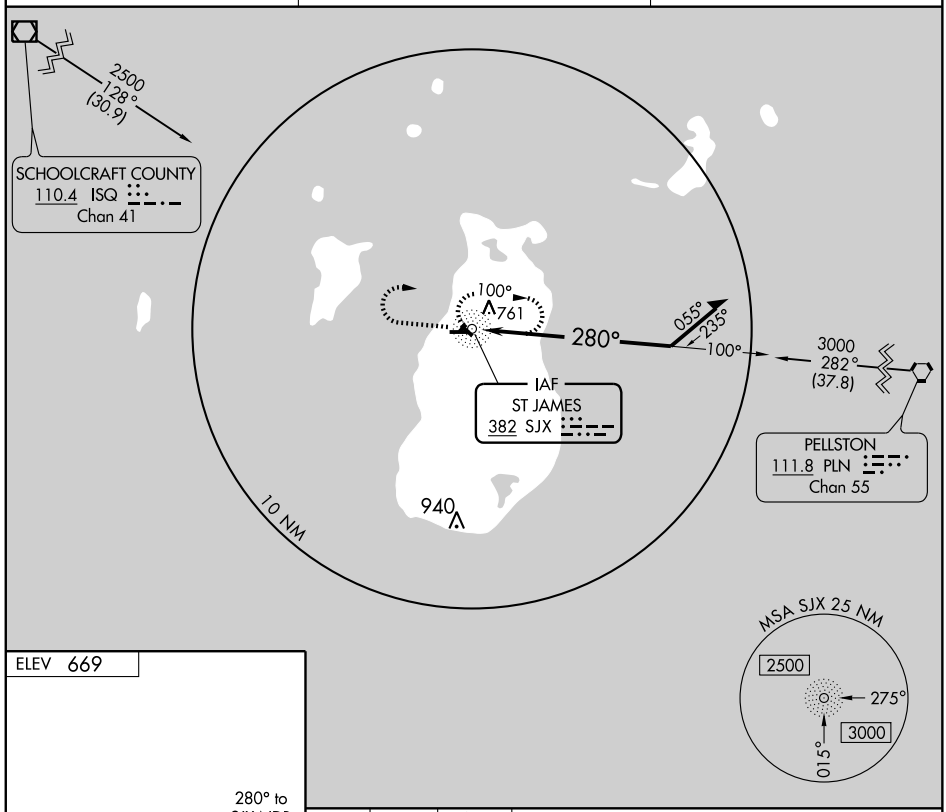
NDB RWY 27
BEAVER ISLAND (SJX)

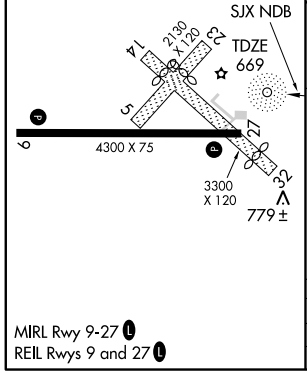
NA

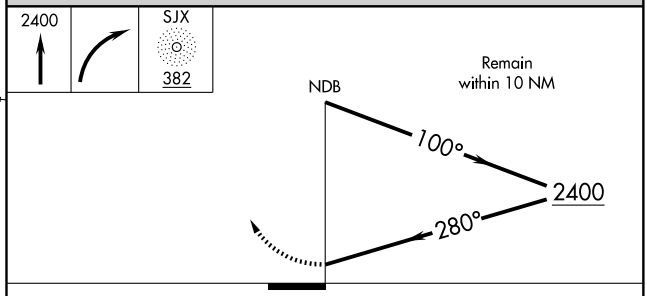
When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 100 feet.

MISSED APPROACH: Climb to 2400 then right turn direct SJX NDB and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.075	134.6 354.05	122.8 (CTAF) L







MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

CATEGORY	A	B	C	D
S-27	1140-1	471 (500-1)	NA	
CIRCLING	1140-1	471 (500-1)	NA	

EC-1. 14 JAN 2010 to 11 FEB 2010

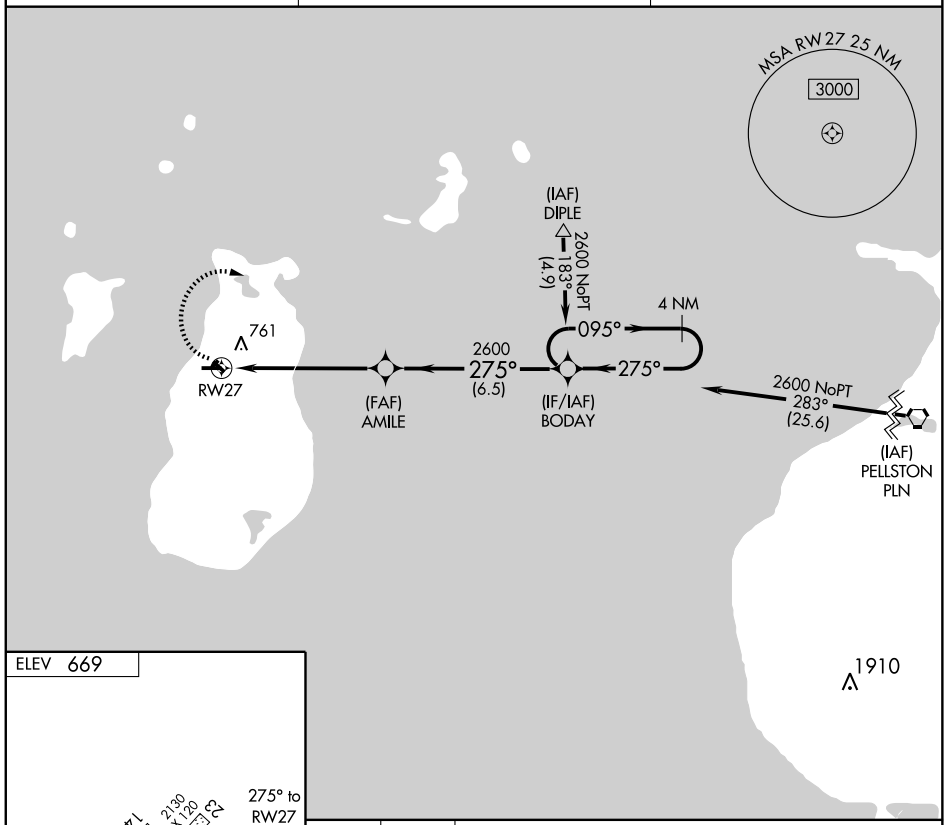
APP CRS	Rwy ldg	4300
275°	TDZE	669
	Apt Elev	669

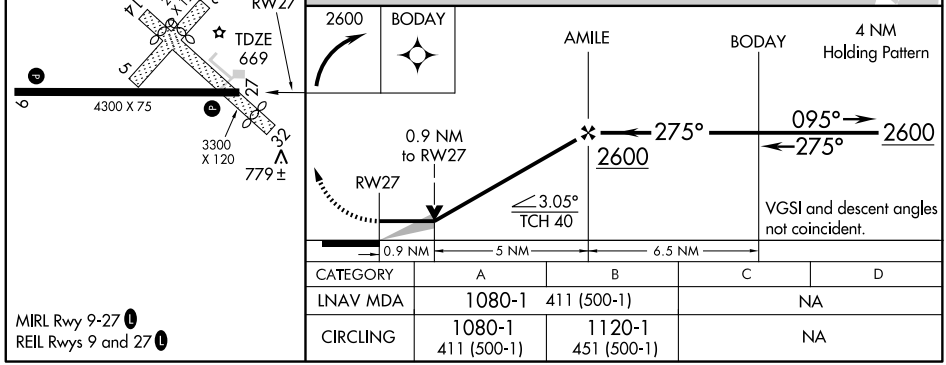
RNAV (GPS) RWY 27
BEAVER ISLAND (SJX)

DME/DME RNP -0.3 NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 100 feet.
VDP NA when using Pellston altimeter setting.

MISSED APPROACH: Climbing right turn to 2600 direct BODAY and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.075	134.6 354.05	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1080-1	411 (500-1)	NA	
CIRCLING	1080-1 411 (500-1)	1120-1 451 (500-1)	NA	

MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

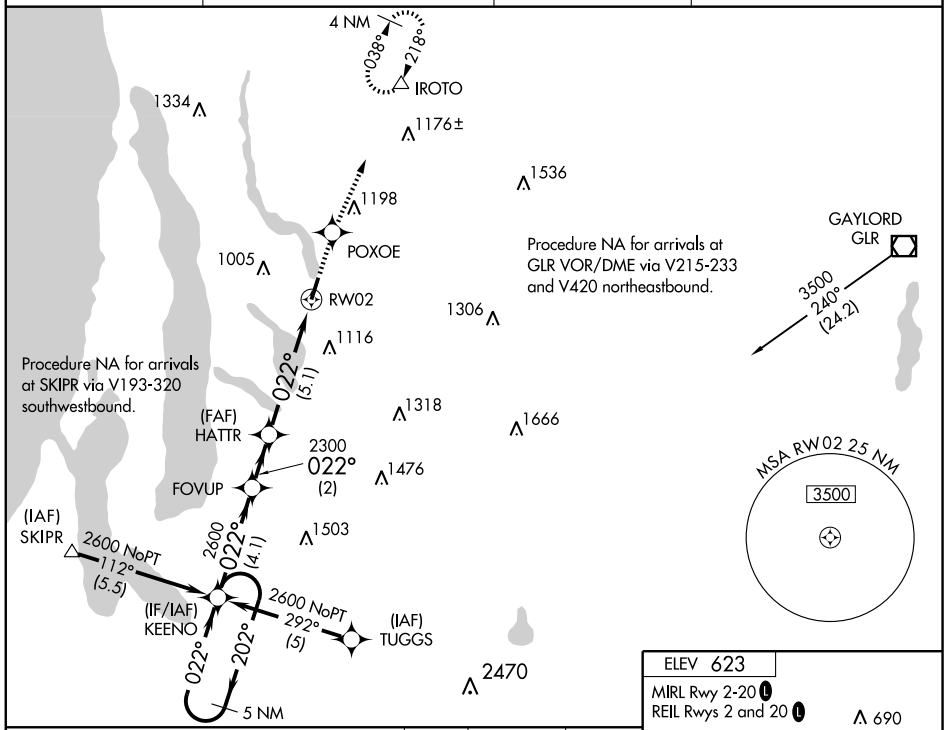
WAAS CH 56301 W02A	APP CRS 022°	Rwy ldg 5000 TDZE 623 Apt Elev 623

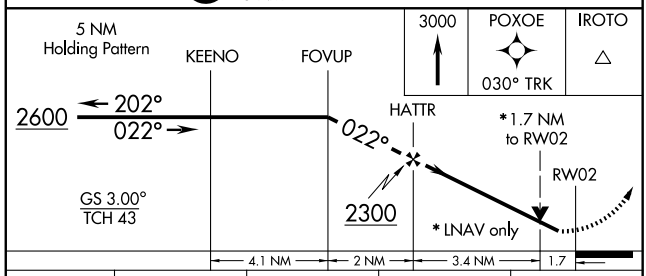
RNAV (GPS) RWY 2
BELLAIRE / ANTRIM COUNTY (ACB)

If local altimeter setting not received, use Cherry Capital altimeter setting and increase all DAs/MDAs 60 feet. VDP NA when using Cherry Capital altimeter setting. DME/DME RNP-0.3 NA.

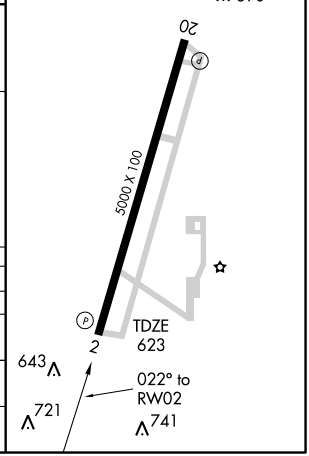
MISSED APPROACH: Climb to 3000 direct POXOE and via 030° track to IROTO and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
119.275	132.9 338.3	121.725	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	908-1 285 (300-1)			
LNAV/ VNAV DA	NA			
LNAV MDA	1220-1 597 (600-1)		1220-1½ 597 (600-1½)	1220-1¾ 597 (600-1¾)
CIRCLING	1260-1 637 (700-1)	1340-1 717 (800-1)	1360-2 737 (800-2)	1440-2¾ 817 (900-2¾)



EC-1, 14 JAN 2010 to 11 FEB 2010

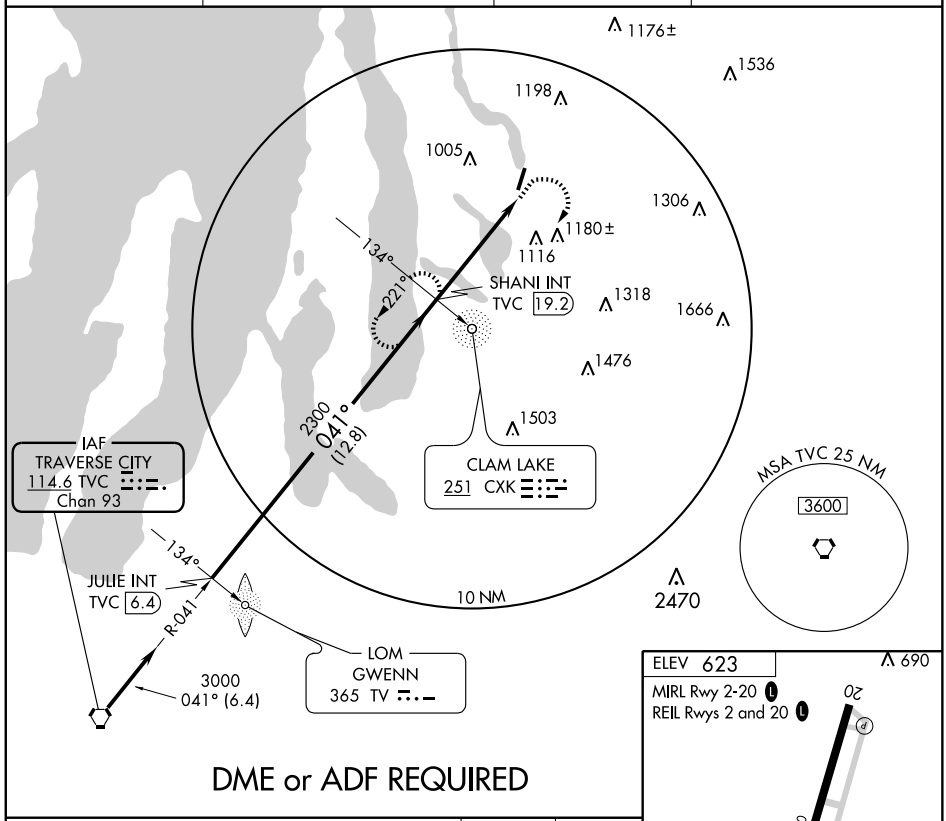
VORTAC TVC	APP CRS	Rwy ldg	5000
114.6	041°	TDZE	623
Chan 93		Apt Elev	623

VOR RWY 2

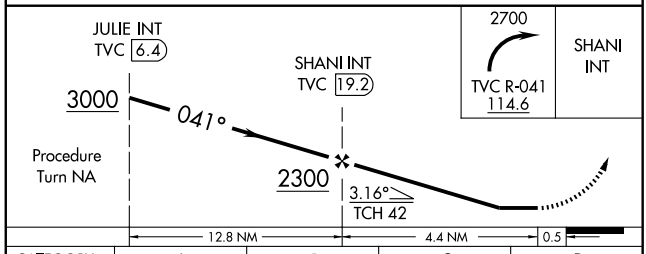
BELLAIRE / ANTRIM COUNTY (ACB)

MISSED APPROACH: Climbing right turn to 2700 via TVC R-041 to SHANI Int/19.2 DME and hold.

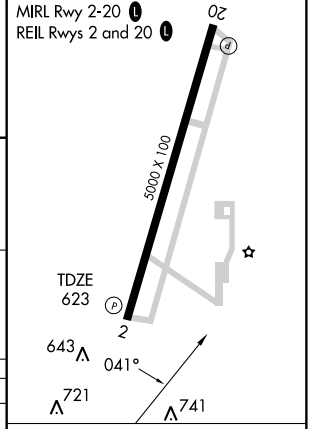
AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
119.275	132.9 338.3	121.725	122.7 (CTAF) L



DME or ADF REQUIRED



CATEGORY	A	B	C	D
S-2	1540-1¼ 917 (1000-1¼)		1540-2¾ 917 (1000-2¾)	1540-3 917-(1000-3)
CIRCLING	1540-1¼ 917 (1000-1¼)		1540-2¾ 917 (1000-2¾)	1540-3 917 (1000-3)



FAF to MAP 4.4 NM					
Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-BEH	APP CRS	Rwy ldg	4536
108.5	273°	TDZE	637
		Apt Elev	643

ILS RWY 27

BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

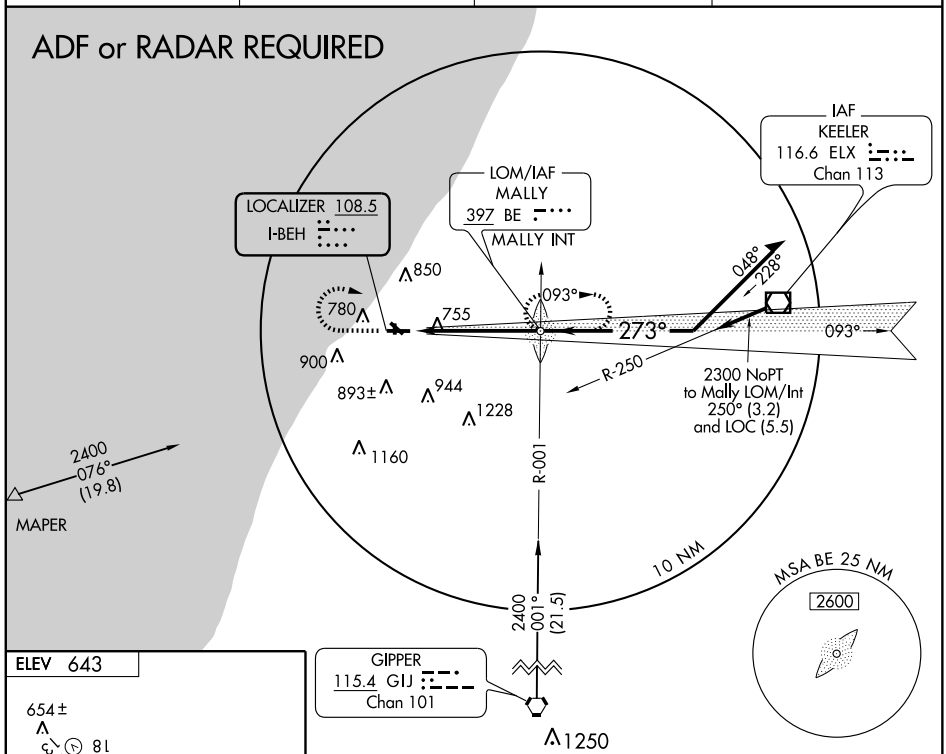
LOC unusable beyond 20° left of course.
Cats A and B S-LOC 27 visibility increased ¼ mile for inoperative MALSR.
S-ILS 27 inoperative table does not apply.

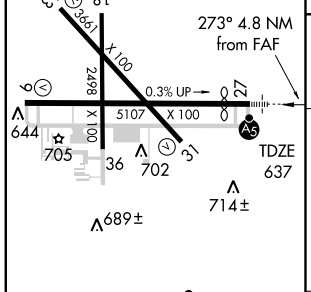
NA

MALSR

MISSED APPROACH: Climb to 2400, then right turn direct MALLY LOM and hold.

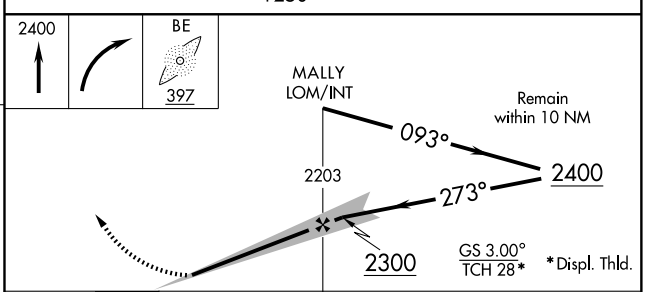
ASOS	SOUTH BEND APP CON★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L





REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36



CATEGORY	A	B	C	D
S-ILS 27	887-¾ 250 (300-¾)			
S-LOC 27	1140-¾ 503 (500-¾)		1140-1 503 (500-1)	
CIRCLING	1140-1 497 (500-1)	1160-1 517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)

LOC I-BEH	APP CRS	Rwy ldg	5107
108.5	093°	TDZE	630
		Apt Elev	643

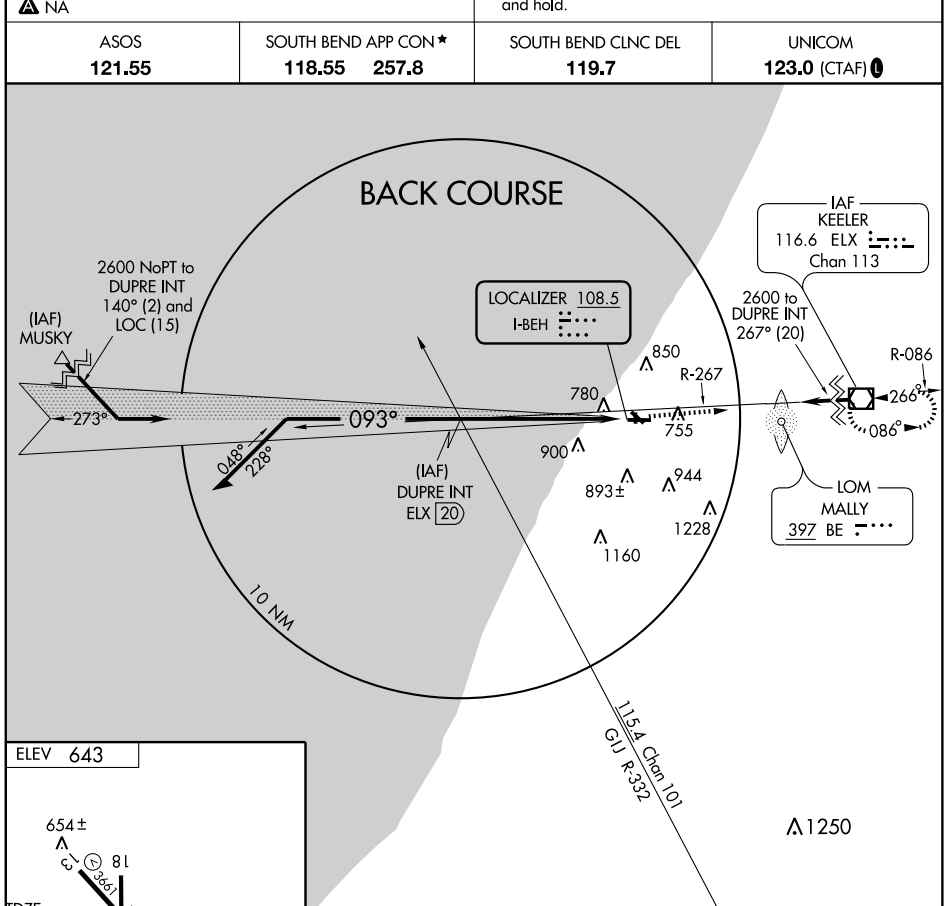
LOC BC RWY 9

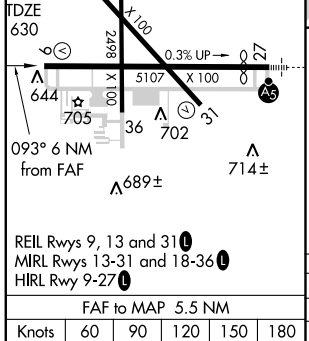
BENTON HARBOR/ SOUTHWEST MICHIGAN RGNL (BEH)

NA

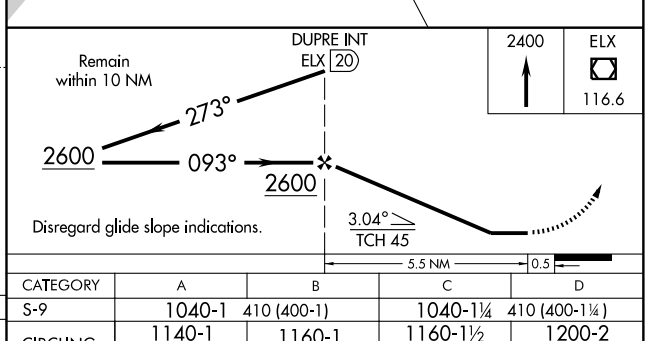
MISSED APPROACH: Climb to 2400 direct ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON ★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L





REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L



FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

CATEGORY	A	B	C	D
S-9	1040-1 410 (400-1)		1040-1¼ 410 (400-1¼)	
CIRCLING	1140-1 497 (500-1)	1160-1 517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM BE	APP CRS	Rwy ldg	4536
397	274°	TDZE	637
		Apt Elev	643

NDB or GPS RWY 27

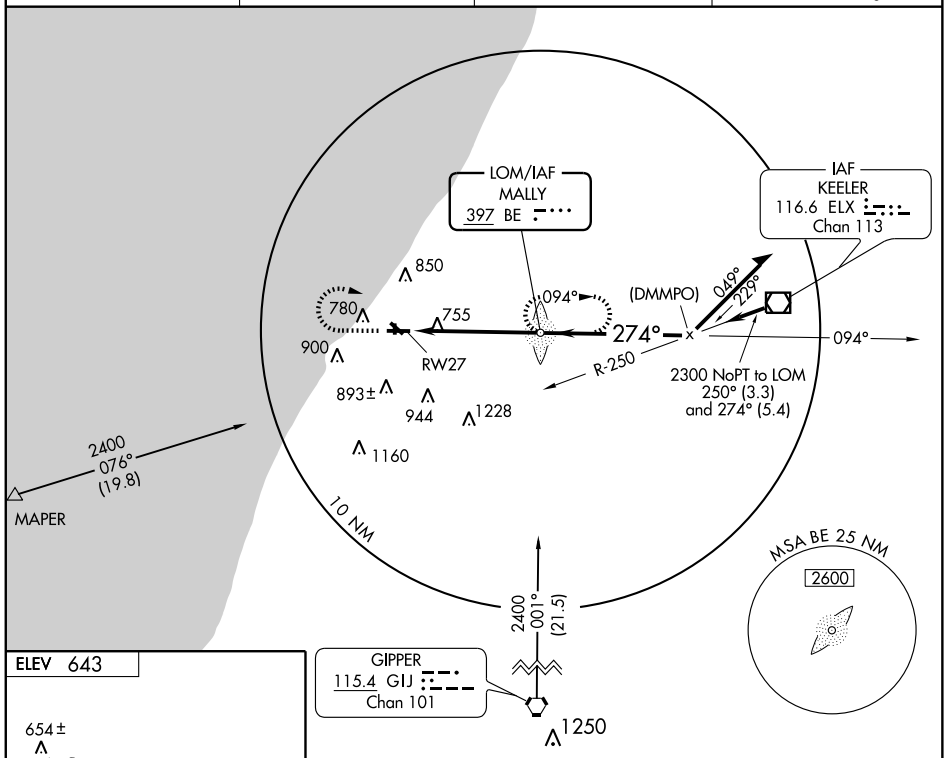
BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

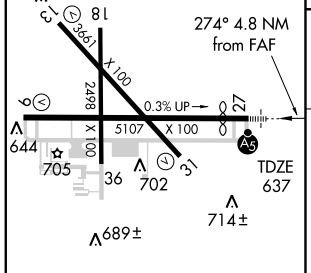
NA

MALSR

MISSED APPROACH: Climb to 2400 then right turn direct BE LOM and hold.

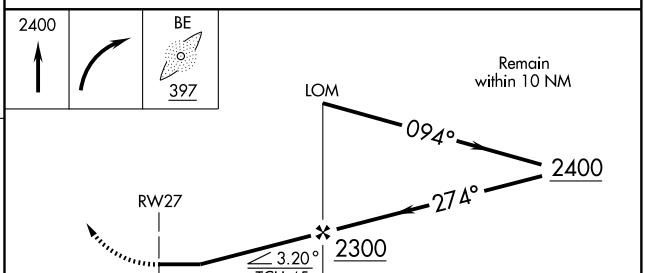
ASOS	SOUTH BEND APP CON ★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L





REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36



CATEGORY	A	B	C	D
S-27	1200-¾ 563 (600-¾)		1200-1 563 (600-1)	1200-1½ 563 (600-1½)
CIRCLING	1200-1 557 (600-1)		1200-1½ 557 (600-1½)	1200-2 557 (600-2)

WAAS CH 86912 W09A	APP CRS 093°	Rwy ldg 5107 TDZE 630 Apt Elev 643

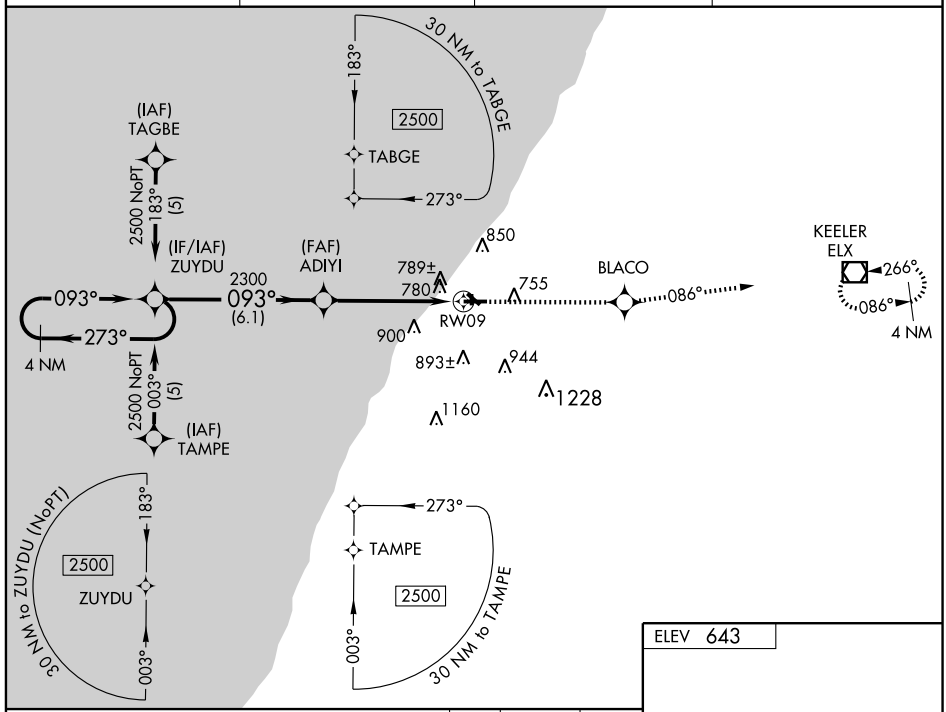
RNAV (GPS) RWY 9

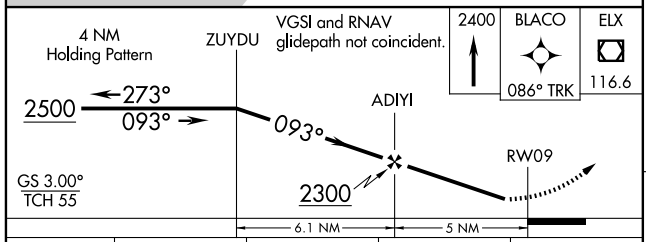
BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

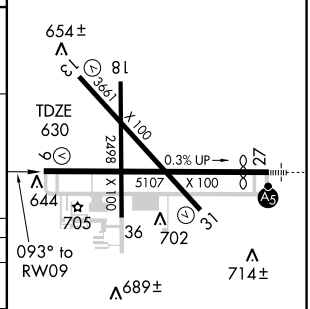
Baro-VNAV NA when using South Haven altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use South Haven altimeter setting and increase all DA/MDA 40 feet and LPV all Cats visibility ¼ mile and LNAV Cat D visibility ¼ mile.

MISSED APPROACH: Climb to 2400 direct BLACO and via 086° track to ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON★	SOUTH BEND CLNC DEL	UNICOM
121.55	118.55 257.8	119.7	123.0 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1019-1¼ 389 (400- 1¼)			
LNAV/VNAV DA	1101-1¾ 471 (500- 1¾)			
LNAV MDA	1040-1 410 (500- 1)		1040-1¼ 410 (500- 1¼)	
CIRCLING	1120-1 477 (500- 1)		1160-1½ 517 (600- 1½)	1200-2 557 (600- 2)

REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ELX 116.6 Chan 113	APP CRS 086°	Rwy ldg 5107 TDZE 630 Apt Elev 643

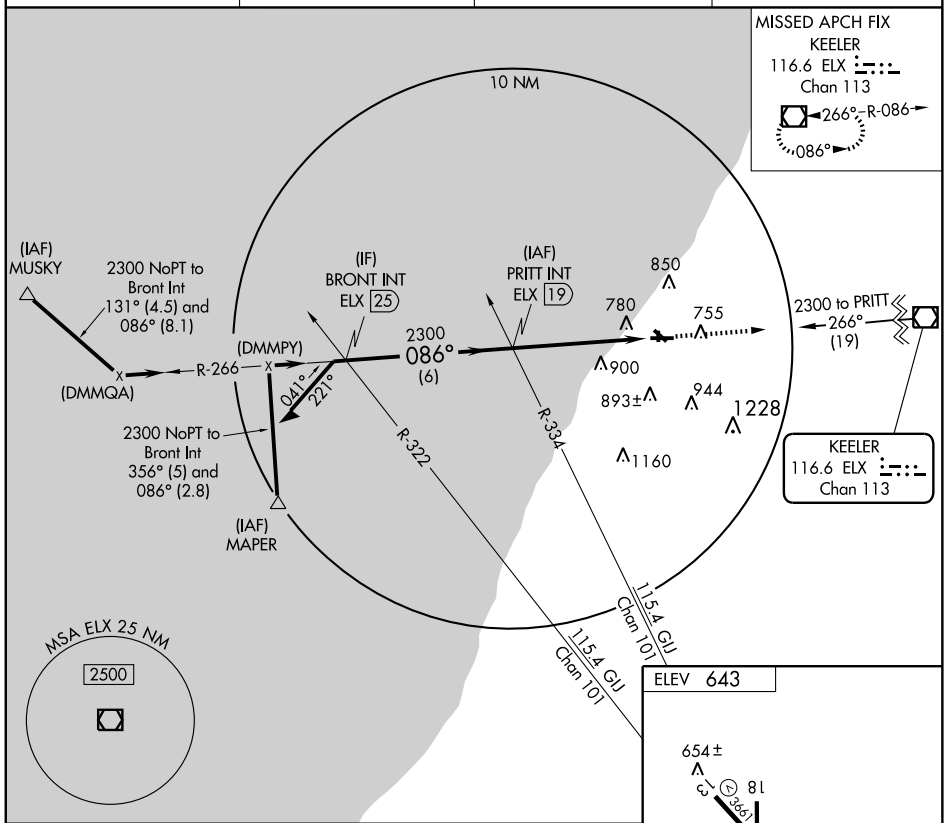
VOR RWY 9

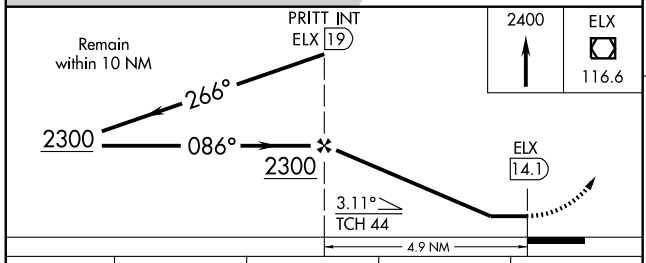
BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

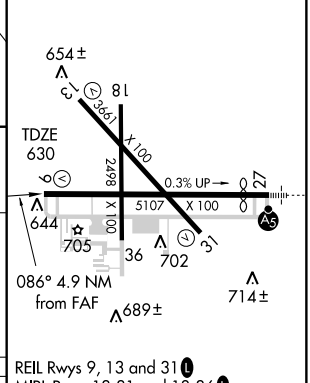
T A Visibility reduction by helicopters NA. When local altimeter setting not received, use South Haven altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climb to 2400 direct ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON ★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L







REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L

CATEGORY	A	B	C	D
S-9	1160-1 530 (600-1)		1160-1½ 530 (600-1½)	1160-1¾ 530 (600-1¾)
CIRCLING	1160-1 517 (600-1)		1160-1½ 517 (600-1½)	1200-2 557 (600-2)

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ELX	APP CRS	Rwy ldg	4536
116.6	266°	TDZE	637
Chan 113		Apt Elev	643

VOR RWY 27

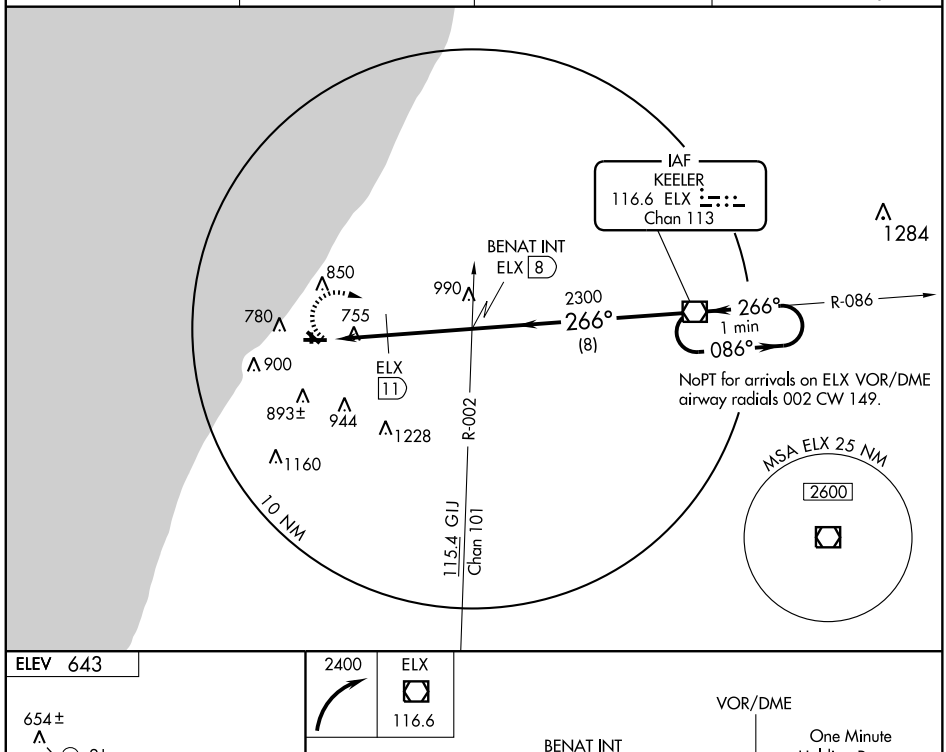
BENTON HARBOR/SOUTHWEST MICHIGAN RGNL (BEH)

Cats A and B S-27 visibility increased ¼ mile for inoperative MALSR.

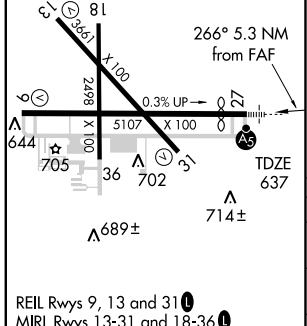
MALSR

MISSED APPROACH: Climbing right turn to 2400 direct ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON ★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L

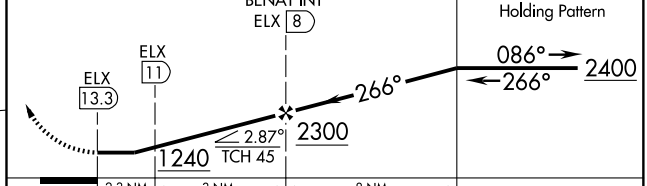


ELEV 643



REIL Rwys 9, 13 and 31 L
MIRL Rwys 13-31 and 18-36 L
HIRL Rwy 9-27 L

FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46



CATEGORY	A	B	C	D
S-27	1240-¾ 603 (600-¾)		1240-1¼ 603 (600-1¼)	1240-1½ 603 (600-1½)
CIRCLING	1240-1 597 (600-1)		1240-1¾ 597 (600-1¾)	1240-2 597 (600-2)
DME MINIMUMS				
S-27	1120-¾ 483 (500-¾)			1120-1 483 (500-1)
CIRCLING	1140-1 497 (500-1)	1160-1 517 (600-1)	1160-1½ 517 (600-1½)	1200-2 557 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ELX	APP CRS	Rwy ldg	N/A
116.6	224°	TDZE	N/A
Chan 113		Apt Elev	668

VOR-A

BERRIEN SPRINGS / ANDREWS UNIVERSITY AIRPARK (C2Ø)

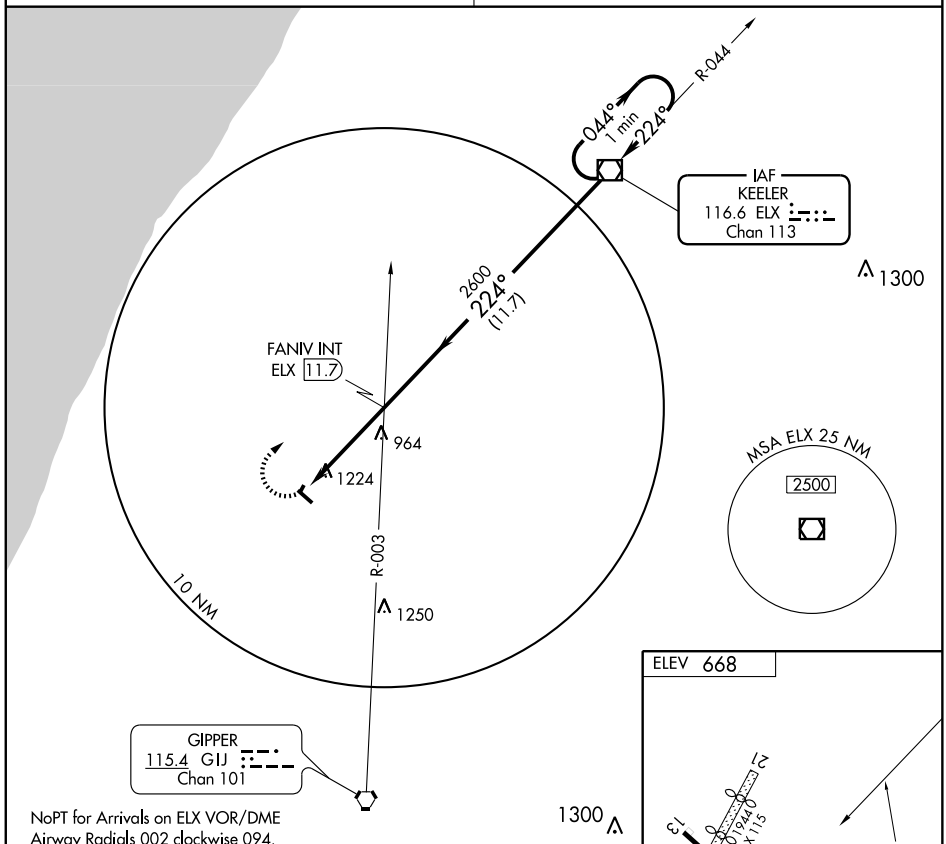
NA

Use Benton Harbor altimeter setting.
Procedure NA at night.

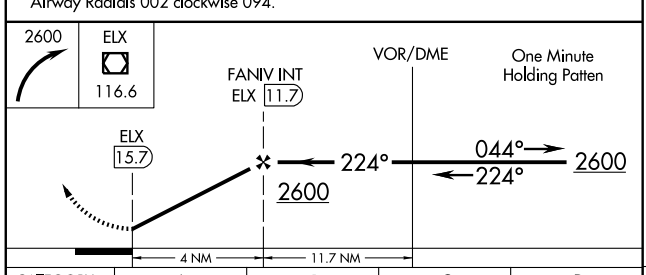
MISSED APPROACH: Climbing right turn to 2600 direct ELX VOR/DME and hold.

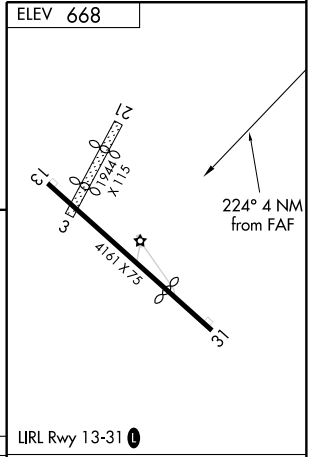
SOUTH BEND APP CON *
118.55 257.8

UNICOM
122.7 (CTAF) L



NoPT for Arrivals on ELX VOR/DME
Airway Radials 002 clockwise 094.





CATEGORY	A	B	C	D
CIRCLING	1620-1¼ 952 (1000-1¼)	1620-1½ 952 (1000-1½)	NA	

FAF to MAP 4 NM					
Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4300
275°	TDZE	977
	Apt Elev	990

GPS RWY 27

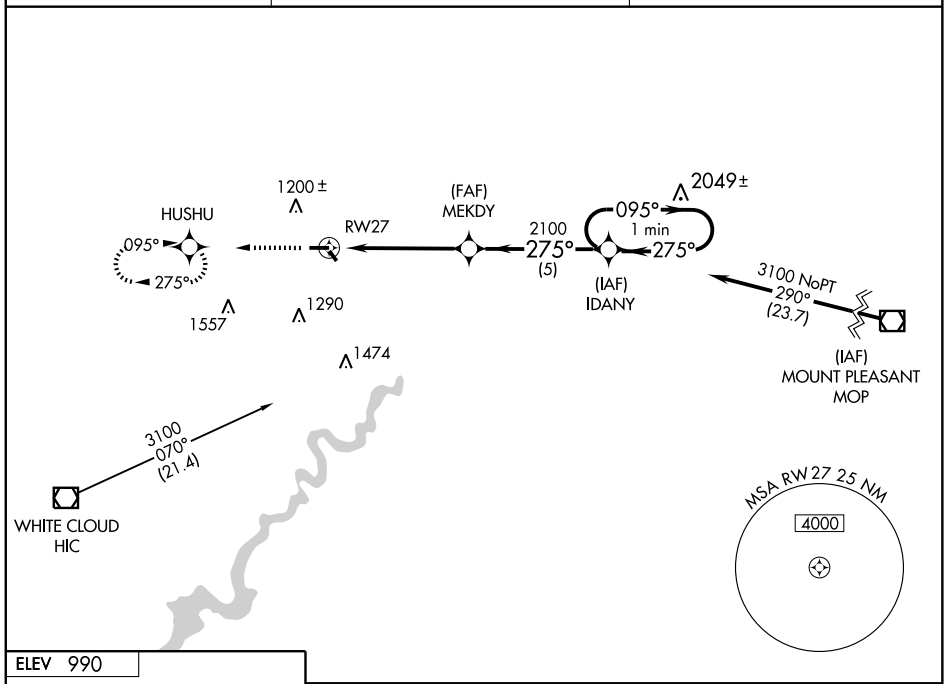
BIG RAPIDS / ROBEN-HOOD (RQB)

Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting.

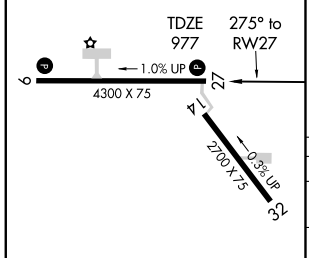
NA

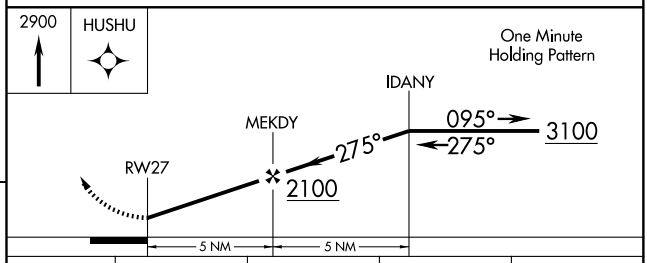
MISSED APPROACH: Climb to 2900 direct HUSHU WP and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.125	120.85 322.35	122.8 (CTAF) L



ELEV 990





CATEGORY	A	B	C	D
S-27	1460-1 483 (500-1)		1460-1¼ 483 (500-1¼)	1460-1½ 483 (500-1½)
CIRCLING	1500-1 510 (600-1)		1540-1½ 550 (600-1½)	1600-2 610 (700-2)
MUSKEGON ALTIMETER SETTING MINIMUMS				
S-27	1620-1 643 (700-1)		1620-1¾ 643 (700-1¾)	1620-2 643 (700-2)
CIRCLING	1660-1 670 (700-1)		1700-2 710 (800-2)	1760-2½ 770 (800-2½)

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME HIC	APP CRS	Rwy ldg	N/A
117.6	047°	TDZE	N/A
Chan 123		Apt Elev	990

VOR/DME or GPS-A

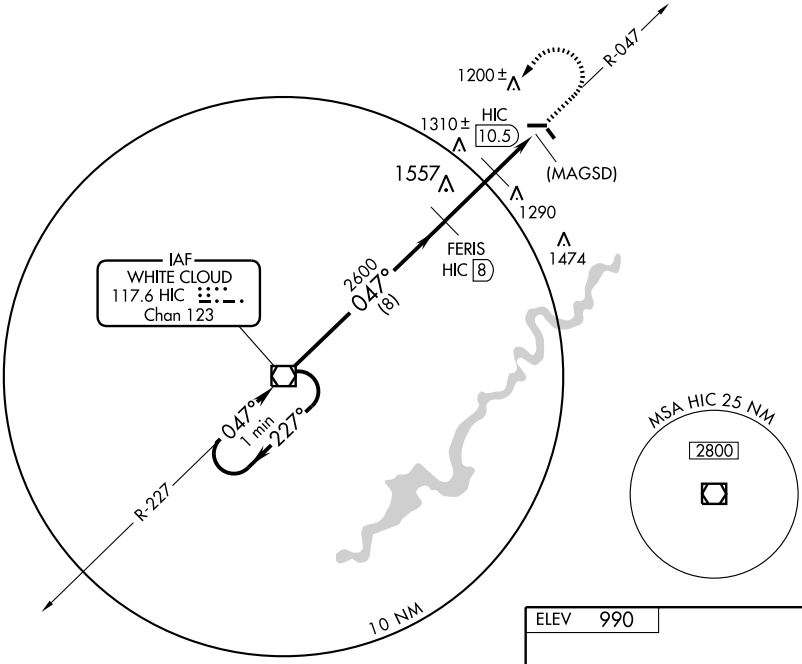
BIG RAPIDS / ROBEN-HOOD (RQB)

Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting.

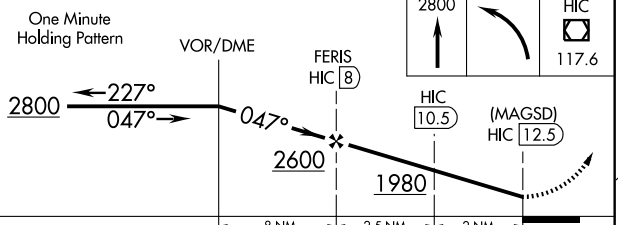
NA

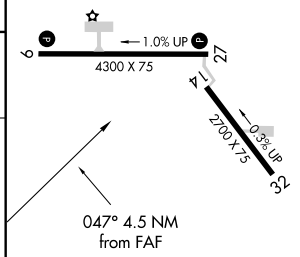
MISSED APPROACH: Climb to 2800, then left turn direct HIC VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.125	120.85 322.35	122.8 (CTAF) L



NoPT for arrivals on HIC VOR/DME airway radials 140 CW 303.





REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 14-32 L

CATEGORY	A	B	C	D
CIRCLING	1540-1 550 (600-1)		1540-1½ 550 (600-1½)	1600-2 610 (700-2)
MUSKEGON ALTIMETER SETTING MINIMUMS				
CIRCLING	1700-1 710 (800-1)		1700-2 710 (800-2)	1760-2½ 770 (800-2½)

Knots	60	90	120	150	180
Min:Sec					

APP CRS	Rwy ldg	4887
175°	TDZE	707
	Apt Elev	719

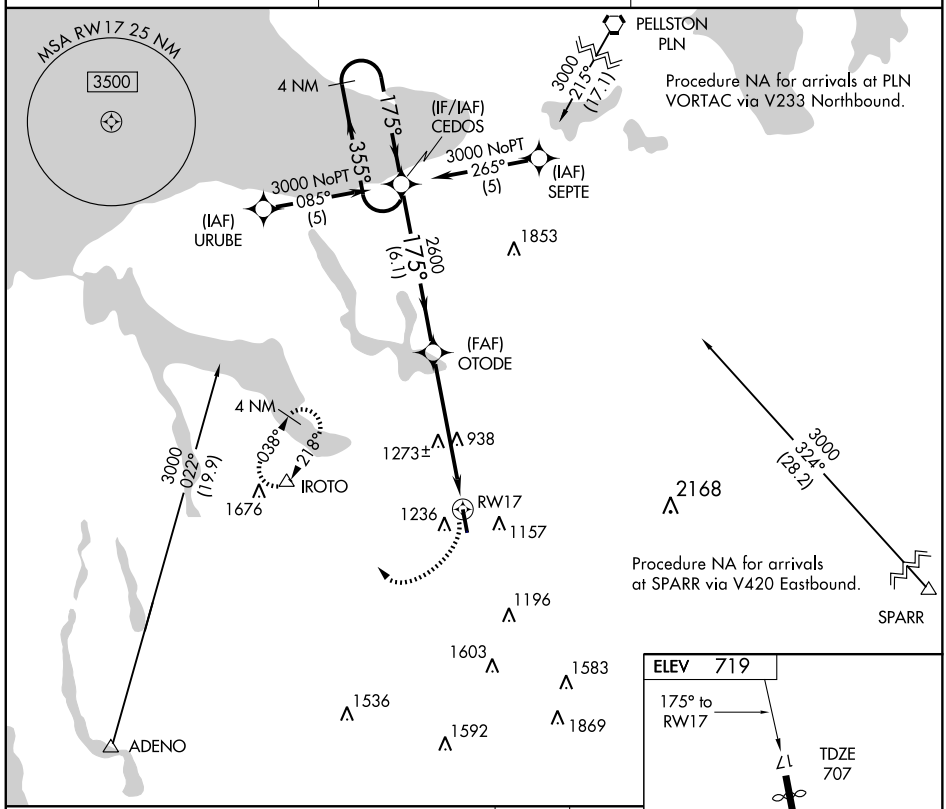
RNAV (GPS) RWY 17

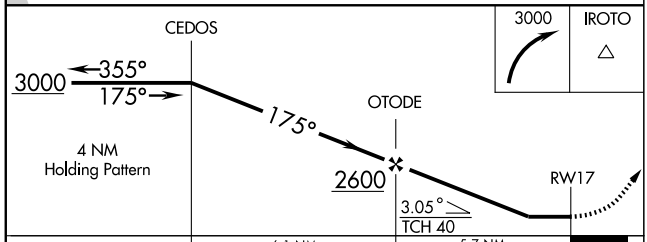
BOYNE FALLS/ BOYNE MOUNTAIN (BFA)

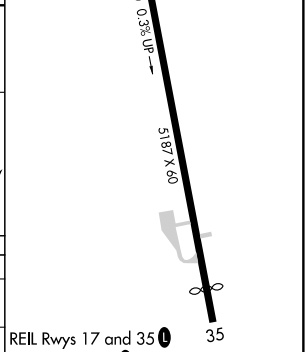
T NA Circling NA west of Rwy 17-35. DME/DME RNP-0.3 NA. Use Bellaire altimeter setting; when not received, use Pellston altimeter setting and increase all MDAs 20 feet and increase LNAV CATs A, C, and D visibility ¼ mile, and Circling CATs A and C ¼ mile.

MISSED APPROACH: Climbing right turn to 3000 direct IROTO and hold.

MINNEAPOLIS CENTER	UNICOM	
134.6 354.05	122.8 (CTAF)	122.85 L







CATEGORY	A	B	C	D
LNAV MDA	1580 - 1 873 (900-1)	1580 - 1¼ 873 (900-1¼)	1580 - 2½ 873 (900-2½)	1580 - 2¾ 873 (900-2¾)
CIRCLING	1580 - 1 861 (900-1)	1580 - 1¼ 861 (900-1¼)	1580 - 2½ 861 (900-2½)	1640 - 3 921 (1000-3)

REIL Rwys 17 and 35 L
LIRL Rwy 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4687
355°	TDZE	719
	Apt Elev	719

RNAV (GPS) RWY 35

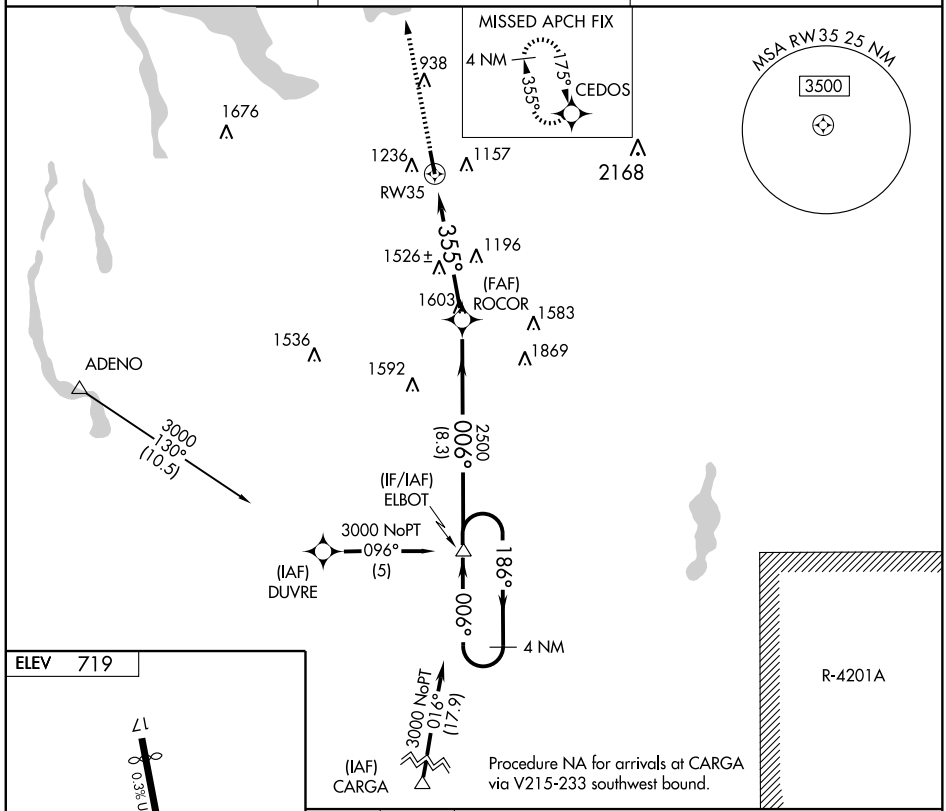
BOYNE FALLS/ BOYNE MOUNTAIN (BFA)

T NA

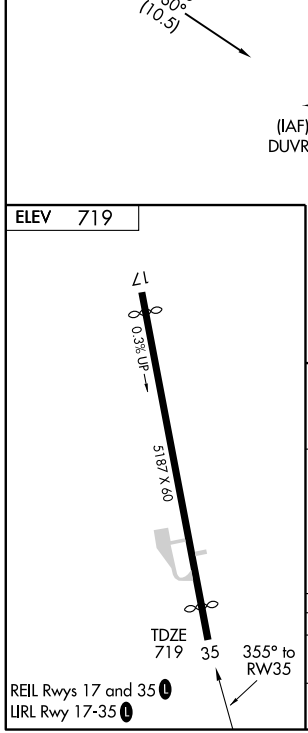
Circling NA west of Rwy 17-35. DME/DME RNP-0.3 NA.Visibility reduction by helicopters NA. Use Bellaire altimeter setting; when not received, use Pellston altimeter setting.

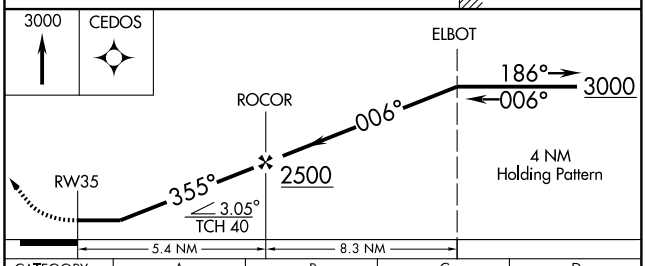
MISSED APPROACH: Climb to 3000 direct CEDOS and hold.

MINNEAPOLIS CENTER	UNICOM	
134.6 354.05	122.8 (CTAF)	122.85 L



Procedure NA for arrivals at CARGA via V215-233 southwest bound.





CATEGORY	A	B	C	D
LNAV MDA	1840 - 1¼ 1121 (1200-1¼)	1840 - 1½ 1121 (1200-1½)	1840 - 3	1121 (1200-3)
CIRCLING	1840 - 1¼ 1121 (1200-1¼)	1840 - 1½ 1121 (1200-1½)	1840 - 3	1121 (1200-3)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-MAY	APP CRS	Rwy ldg	5000
108.55	070°	TDZE	1307
Chan 22		Apt Elev	1307

ILS or LOC RWY 7

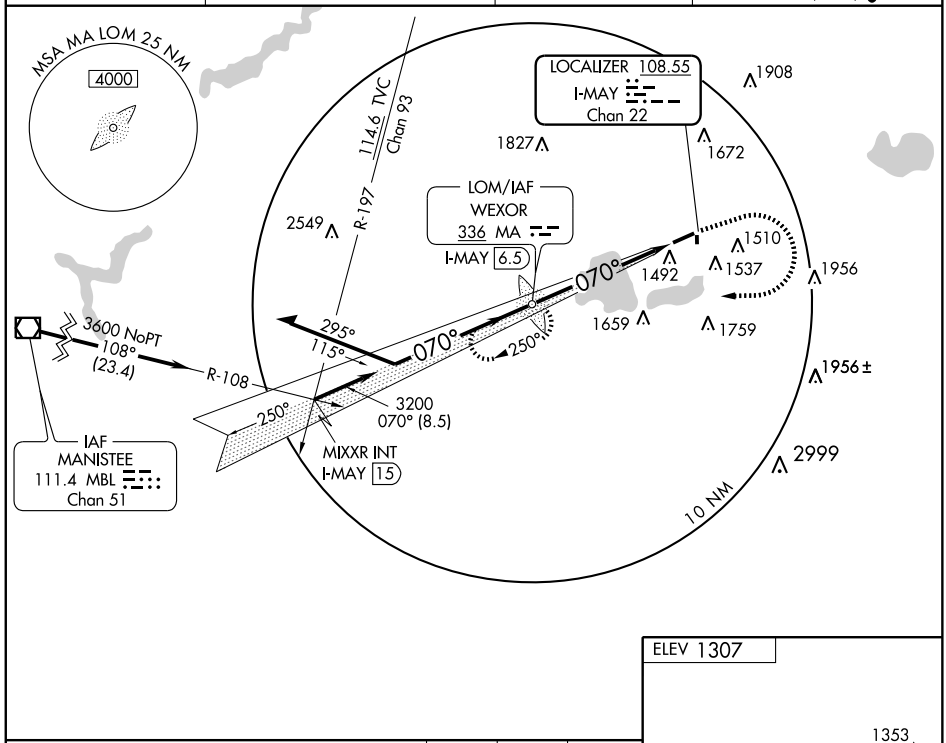
CADILLAC / WEXFORD COUNTY (CAD)

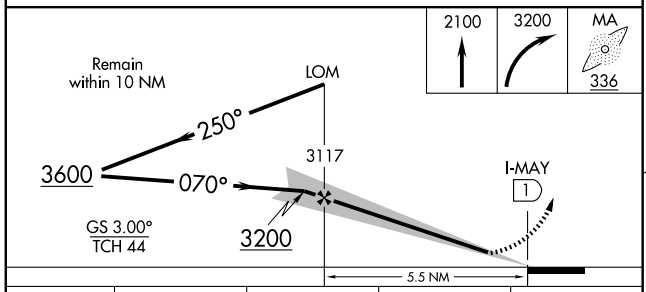
ADF Required. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet and increase S-ILS 7 all Cats visibility ¼ mile, S-LOC 7 visibility Cats C and D ¼ mile, Circling visibility Cat C ½ mile and Cat D ¼ mile. For inoperative MALSR when using Houghton Lake altimeter setting increase S-ILS 7 all Cats visibility to 1¼ mile.

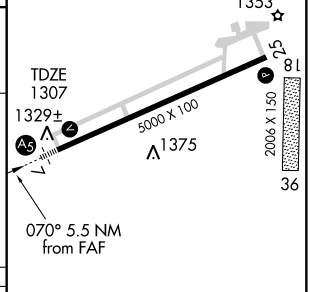
MALSR A5

MISSED APPROACH: Climb to 2100, then climbing right turn to 3200 direct WEXOR LOM I-MAY 6.5 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-ILS 7	1507-½ 200 (200-½)			
S-LOC 7	1660-½ 353 (400-½)			1660-¾ 353 (400-¾)
CIRCLING	1860-1 553 (600-1)		1860-1½ 553 (600-1½)	1880-2 573 (600-2)

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB CAD	APP CRS	Rwy ldg	5000
269	079°	TDZE	1307
		Apt Elev	1307

NDB RWY 7

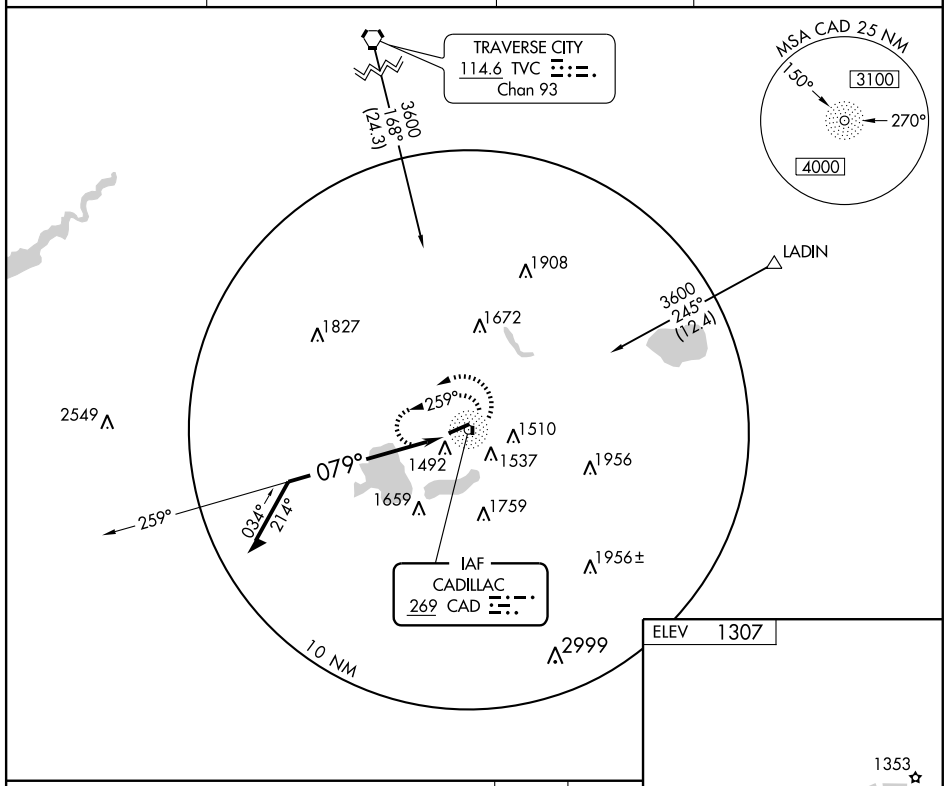
CADILLAC / WEXFORD COUNTY (CAD)

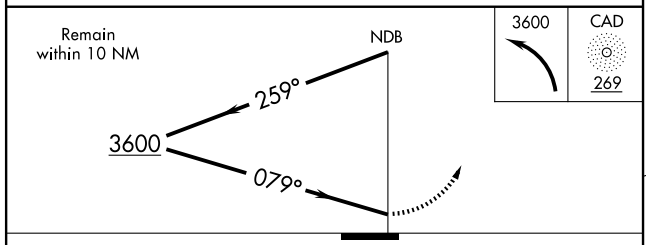
When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 140 feet. Increase S-7 Cats B and D visibility ¼ mile, Cat C ½ mile, and Circling Cat A, B and D visibility ¼ mile, Cat C ½ mile. For inoperative MALSR increase S-7 Cat B visibility to 1¼ miles. For inoperative MALSR when using Houghton Lake altimeter setting increase S-7 Cat A visibility to 1¼ and Cat B to 1½ mile.

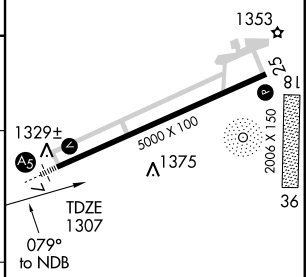
MALSR A5

MISSED APPROACH: Climbing left turn to 3600 in CAD NDB holding pattern.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-7	2120-¾ 813 (900-¾)		2120-2 813 (900-2)	2120-2½ 813 (900-2½)
CIRCLING	2120-1 813 (900-1)	2120-1¼ 813 (900-1¼)	2120-2½ 813 (900-2½)	2120-2¾ 813 (900-2¾)

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB CAD	APP CRS	Rwy ldg	5000
269	235°	TDZE	1305
		Apt Elev	1307

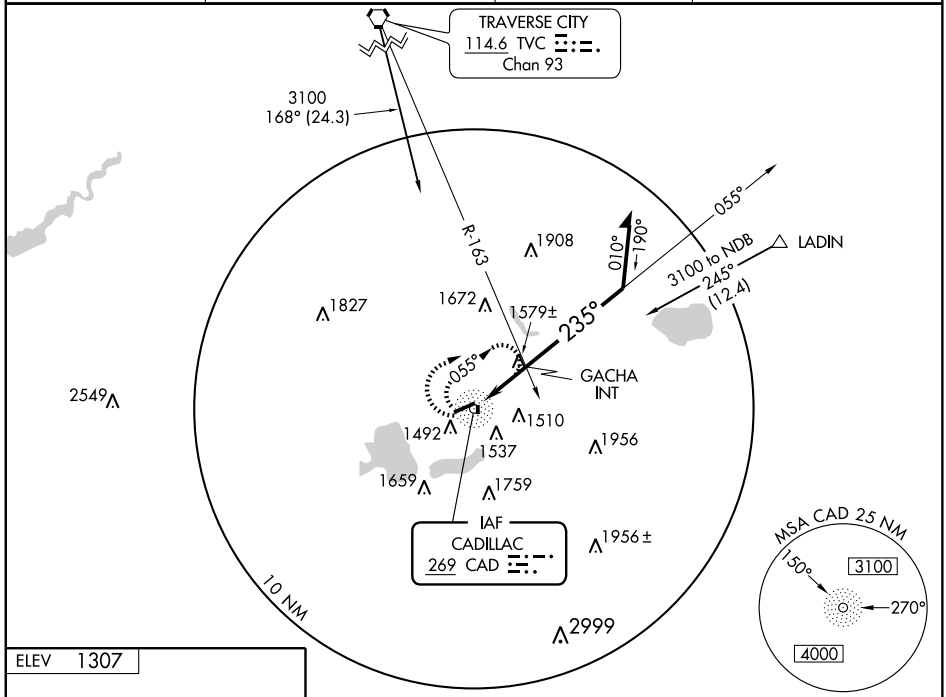
NDB RWY 25

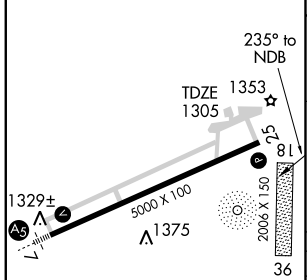
CADILLAC / WEXFORD COUNTY (CAD)

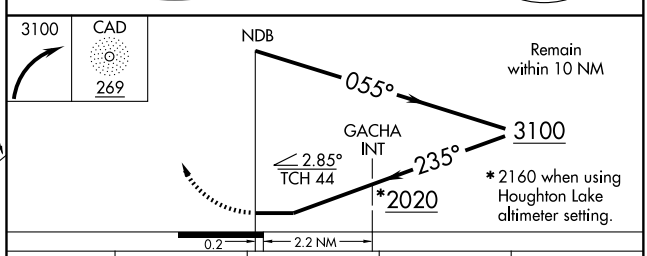
Visibility reduction by helicopters NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 140 feet, S-25 and Circling visibilities Cat B ¼ mile, Cats C and D ½ mile. Increase GACHA fix minimums S-25 visibilities Cats C and D ½ mile, Circling Cat C ½ mile, Cat D ¼ mile.

MISSED APPROACH: Climbing right turn to 3100 in CAD NDB holding pattern.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-25	2020-1 715 (800-1)		2020-2 715 (800-2)	2020-2¼ 715 (800-2¼)
CIRCLING	2020-1 713 (800-1)		2020-2 713 (800-2)	2020-2¼ 713 (800-2¼)
GACHA MINIMUMS				
S-25	1880-1 575 (600-1)		1880-1½ 575 (600-1½)	1880-1¾ 575 (600-1¾)
CIRCLING	1880-1 573 (600-1)		1880-1½ 573 (600-1½)	1880-2 573 (600-2)

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 86413 W07A	APP CRS 070°	Rwy ldg 5000 TDZE 1307 Apt Elev 1307

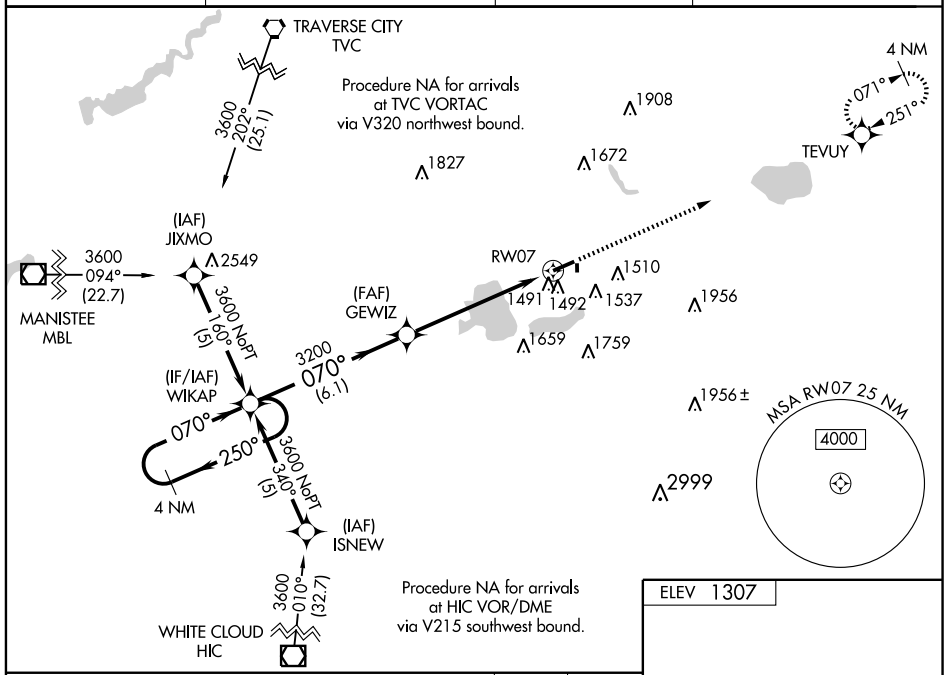
RNAV (GPS) RWY 7
CADILLAC / WEXFORD COUNTY (CAD)

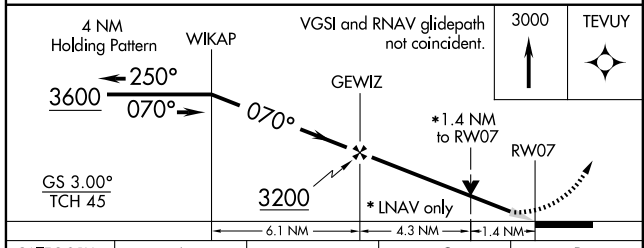
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet, LPV visibilities all Cats ¼ mile, LNAV/VNAV visibilities all Cats ½ mile, LNAV visibilities Cats C and D ½ mile, Circling visibilities Cat C ½ mile and Cat D ¼ mile. For inoperative MALSR when using Houghton Lake altimeter setting, increase LPV all Cats visibility to 1¼.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV and VDP NA when using Houghton Lake altimeter setting.

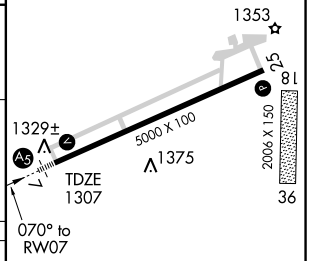
MALSR

MISSED APPROACH: Climb to 3000 direct TEVUY and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1507-½ 200 (200-½)			
LNAV/VNAV DA	1761-1 454 (500-1)			
LNAV MDA	1780-½ 473 (500-½)		1780-¾ 473 (500-¾)	1780-1 473 (500-1)
CIRCLING	1860-1 553 (600-1)		1860-1½ 553 (600-1½)	1880-2 573 (600-2)

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

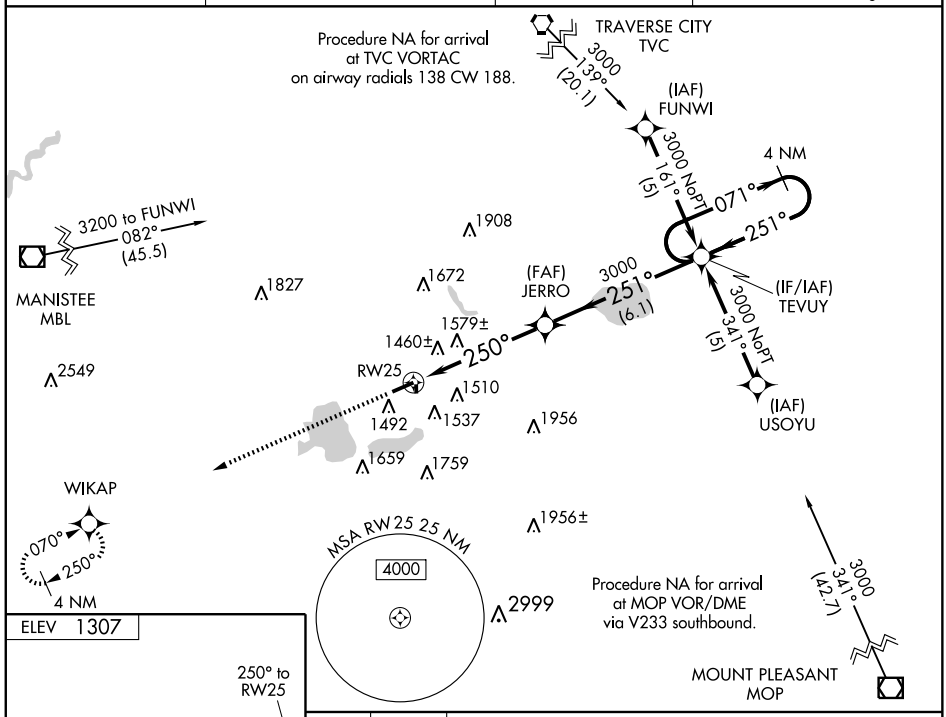
WAAS CH 97513 W25A	APP CRS 250°	Rwy ldg 5000 TDZE 1305 Apt Elev 1307

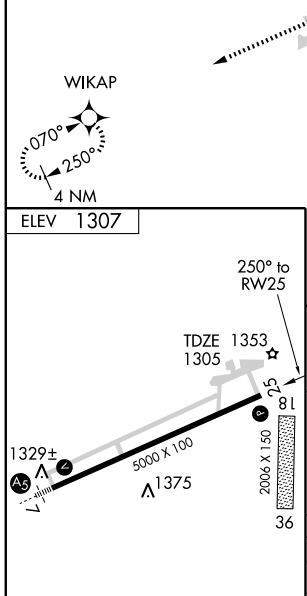
RNAV (GPS) RWY 25
CADILLAC / WEXFORD COUNTY (CAD)

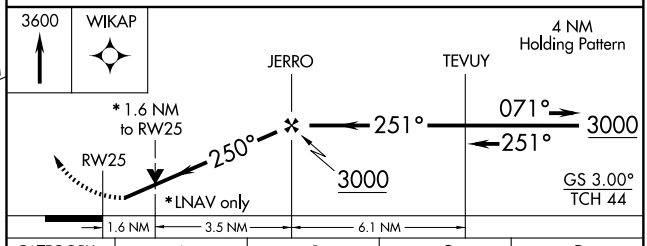
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV and VDP NA when using Houghton Lake altimeter setting. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet, all MDA 140 feet, LPV and LNAV/VNAV visibilites all Cats ½ mile, LNAV visibilities Cats C and D ½ mile, Circling visibilities Cat C ½ mile and Cat D ¼ mile.

MISSED APPROACH: Climb to 3600 direct WIKAP and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1625-1¼ 320 (400-1¼)			
LNAV/VNAV DA	1869-2 564 (600-2)			
LNAV MDA	1840-1 535 (600-1)		1840-1½ 535 (600-1½)	1840-1¾ 535 (600-1¾)
CIRCLING	1860-1 553 (600-1)		1860-1½ 553 (600-1½)	1880-2 573 (600-2)

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4300
058°	TDZE	692
	Apt Elev	701

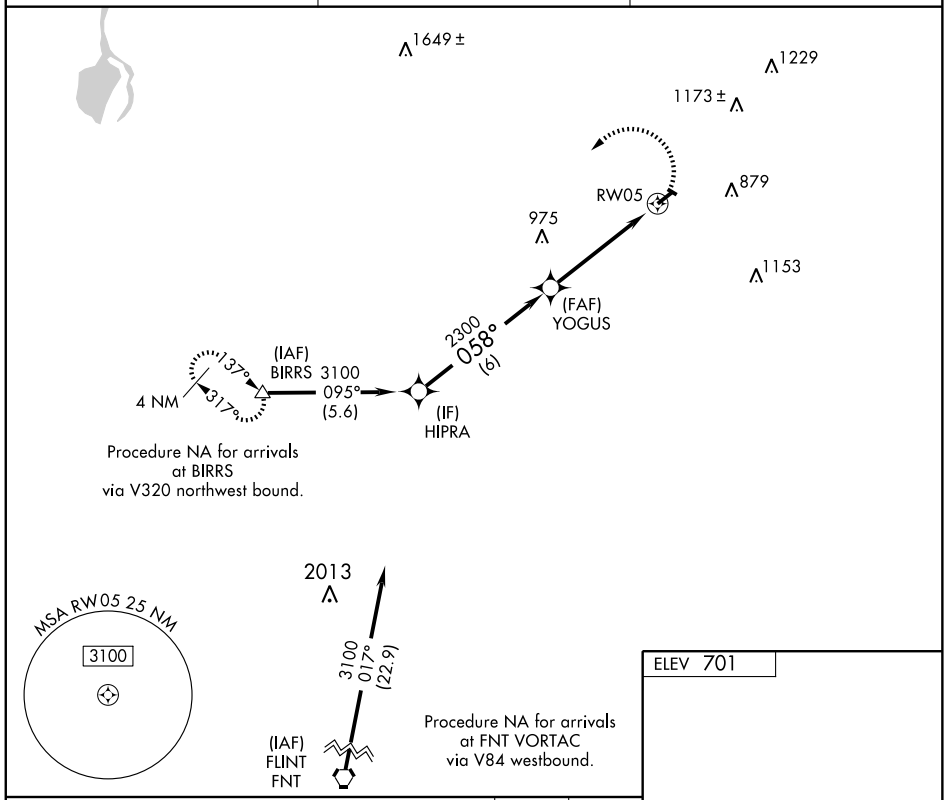
RNAV (GPS) RWY 5

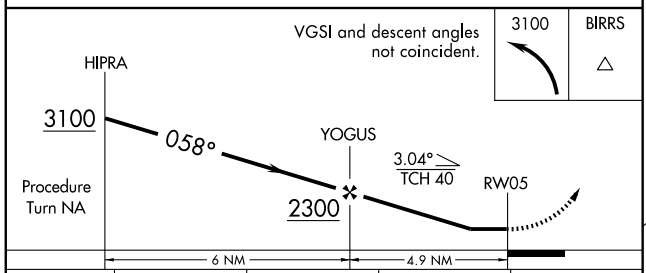
CARO / TUSCOLA AREA (CFS)

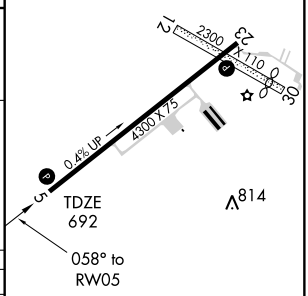
When local altimeter setting not received, use Saginaw/MBS Intl altimeter setting and increase all MDA 80 feet. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climbing left turn to 3100 direct BIRRS and hold.

AWOS-3	SAGINAW APP CON*	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1100-1	408 (400-1)	NA	
CIRCLING	1220-1	519 (600-1)	NA	

REIL Rwys 5 and 23 L
MIRL Rwy 5-23 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4300
238°	TDZE	701
	Apt Elev	701

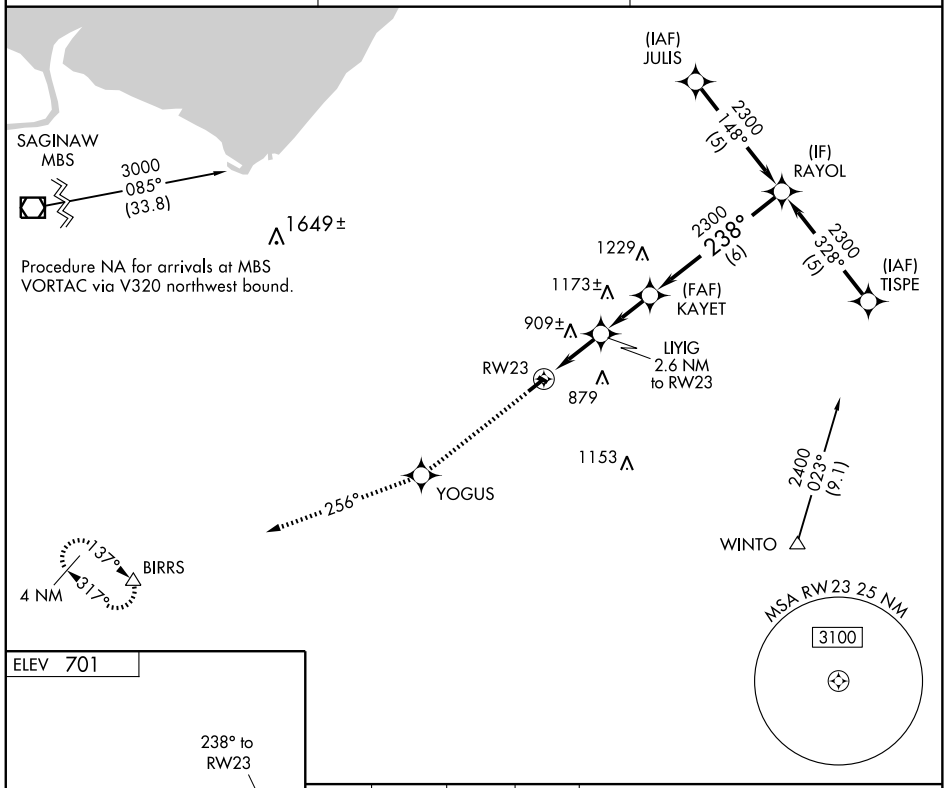
RNAV (GPS) RWY 23

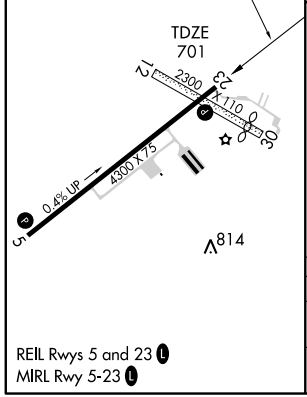
CARO / TUSCOLA AREA (CFS)

When local altimeter setting not received, use Saginaw/MBS Intl altimeter setting and increase all MDA 80 feet. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3100 direct YOGUS and via 256° track to BIRRS and hold.

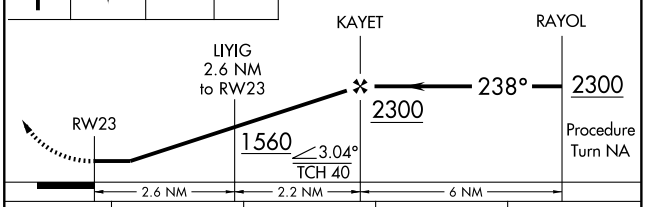
AWOS-3	SAGINAW APP CON ★	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L





3100	YOGUS	256° TRK	BIRRS

VGSI and descent angles not coincident.



CATEGORY	A	B	C	D
LNAV MDA	1160-1 459 (500-1)		NA	
CIRCLING	1220-1 519 (600-1)		NA	

VOR/DME MBS 112.9 Chan 76	APP CRS 102°	Rwy ldg N/A TDZE N/A Apt Elev 701

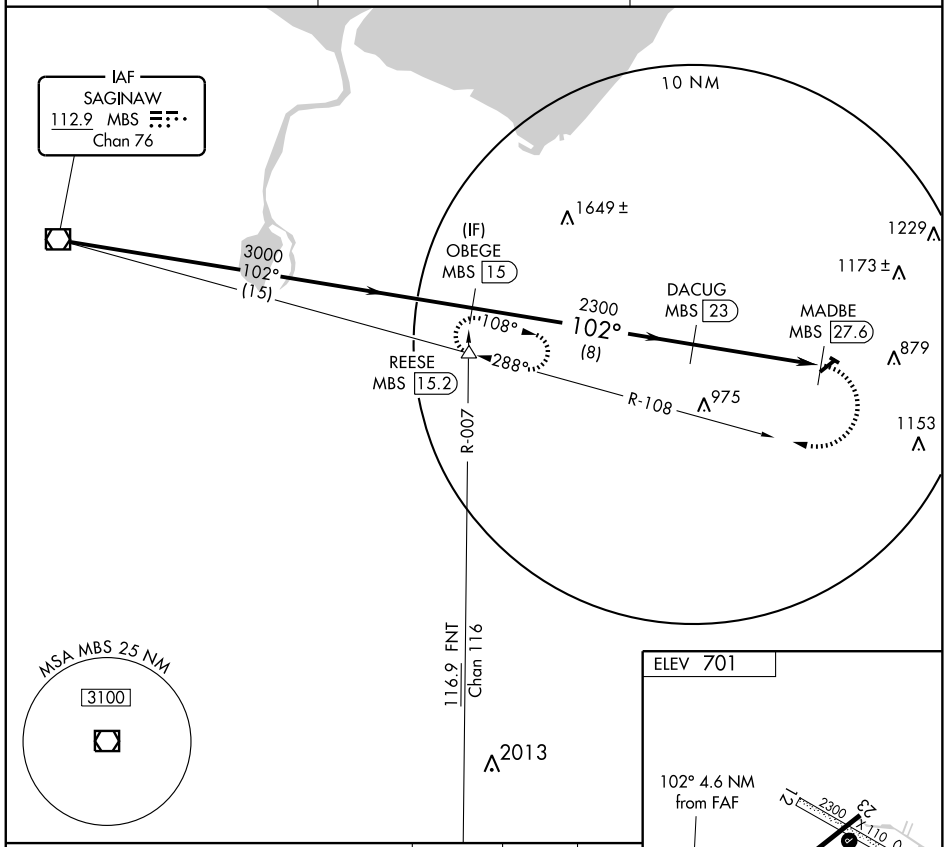
VOR/DME-A

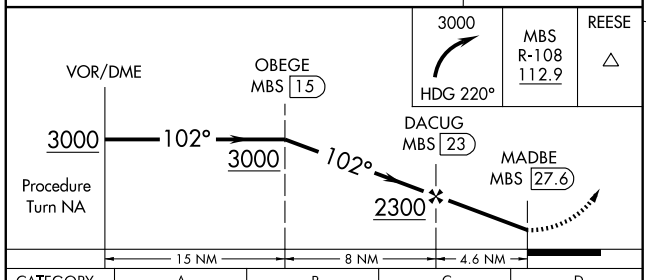
CARO / TUSCOLA AREA (CFS)

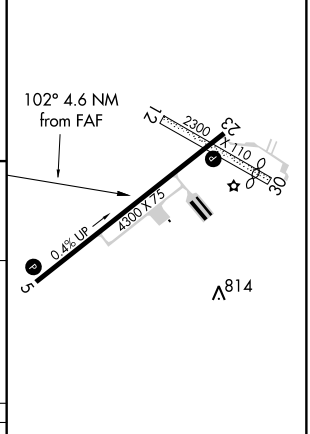
When local altimeter setting not received, use Saginaw/MBS Intl altimeter setting and increase all MDA 80 feet.

MISSED APPROACH: Climbing right turn to 3000 via heading 220° and MBS VOR/DME R-108 to REESE INT and hold.

AWOS-3	SAGINAW APP CON*	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	1220-1 519 (600-1)	1220-1¼ 519 (600-1¼)	NA	

REIL Rwys 5 and 23 L
MIRL Rwy 5-23 L

NDB CVX 392	APP CRS 096°	Rwy ldg 4550 TDZE 669 Apt Elev 669

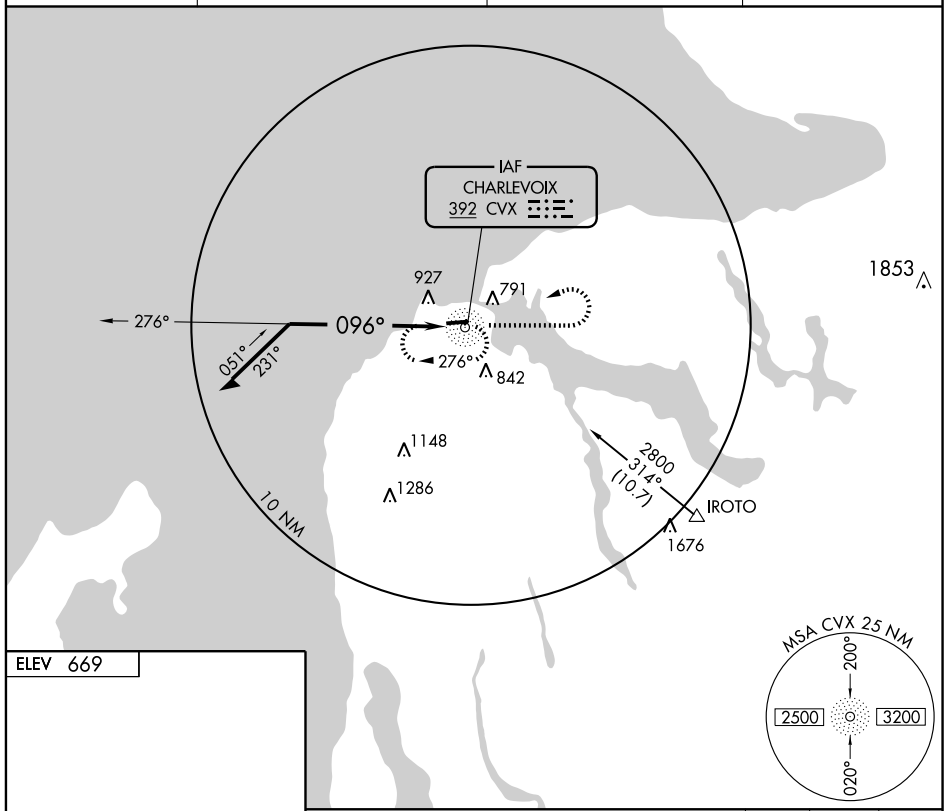
NDB RWY 9
CHARLEVOIX MUNI (CVX)

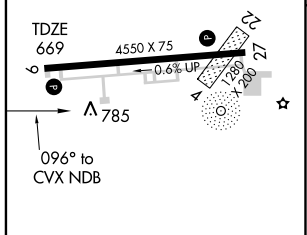
If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 80 feet. Circling to Rwy 4/22 NA at night.

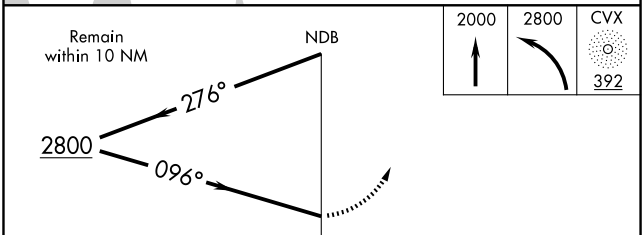
NA

MISSED APPROACH: Climb to 2000 then climbing left turn to 2800 direct CVX NDB and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	GCO
120.0	134.6 354.05	122.8 (CTAF) L	121.725







REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

Knots	60	90	120	150	180
Min:Sec					

CATEGORY	A	B	C	D
S-9	1340-1 671 (700-1)		1340-2 671 (700-2)	1340-2¼ 671 (700-2¼)
CIRCLING	1340-1 671 (700-1)		1340-2 671 (700-2)	1340-2¼ 671 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB CVX	APP CRS	Rwy ldg	4550
392	255°	TDZE	662
		Apt Elev	669

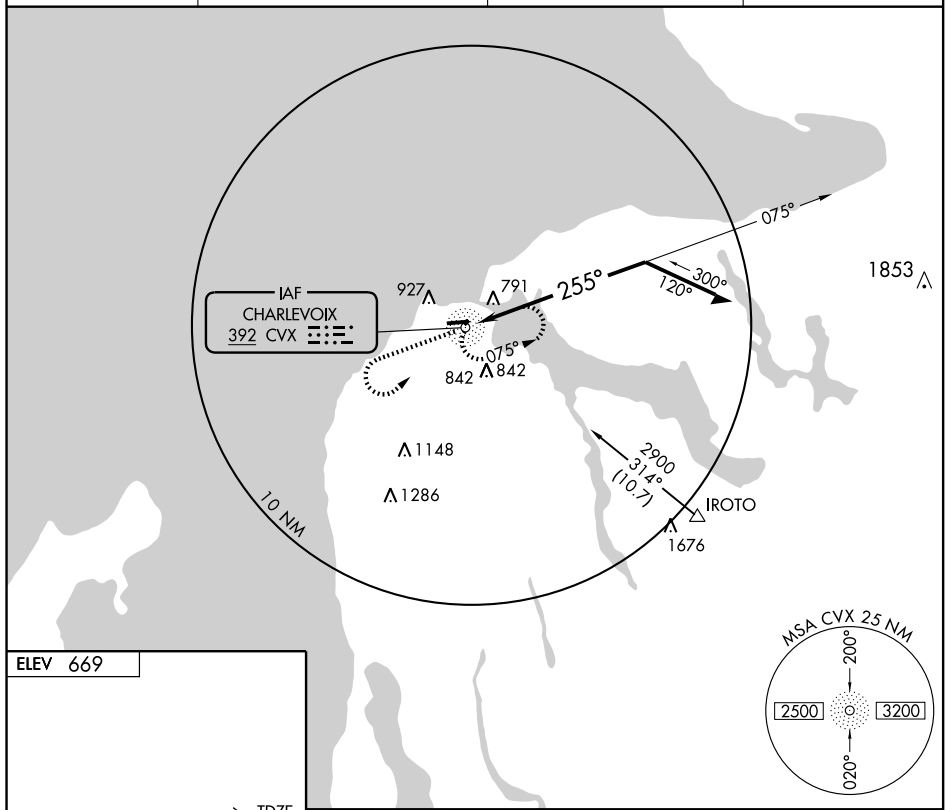
NDB RWY 27
CHARLEVOIX MUNI (CVX)

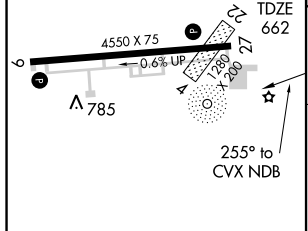
If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 80 feet. Circling to Rwy 4/22 NA at night.

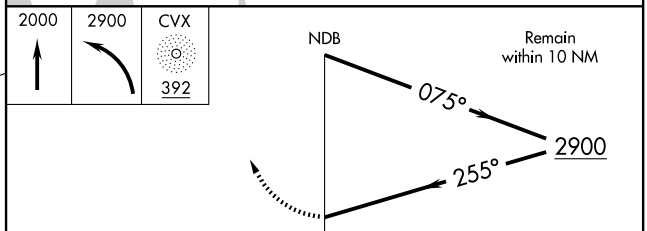
NA

MISSED APPROACH: Climb to 2000 then climbing left turn to 2900 direct CVX NDB and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	GCO
120.0	134.6 354.05	122.8 (CTAF) L	121.725







REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

Knots	60	90	120	150	180
Min:Sec					

CATEGORY	A	B	C	D
S-27	1460-1 798 (800-1)	1460-1¼ 798 (800-1¼)	1460-2¼ 798 (800-2¼)	1460-2½ 798 (800-2½)
CIRCLING	1460-1 791 (800-1)	1460-1¼ 791 (800-1¼)	1460-2¼ 791 (800-2¼)	1460-2½ 791 (800-2½)

EC-1. 14 JAN 2010 to 11 FEB 2010

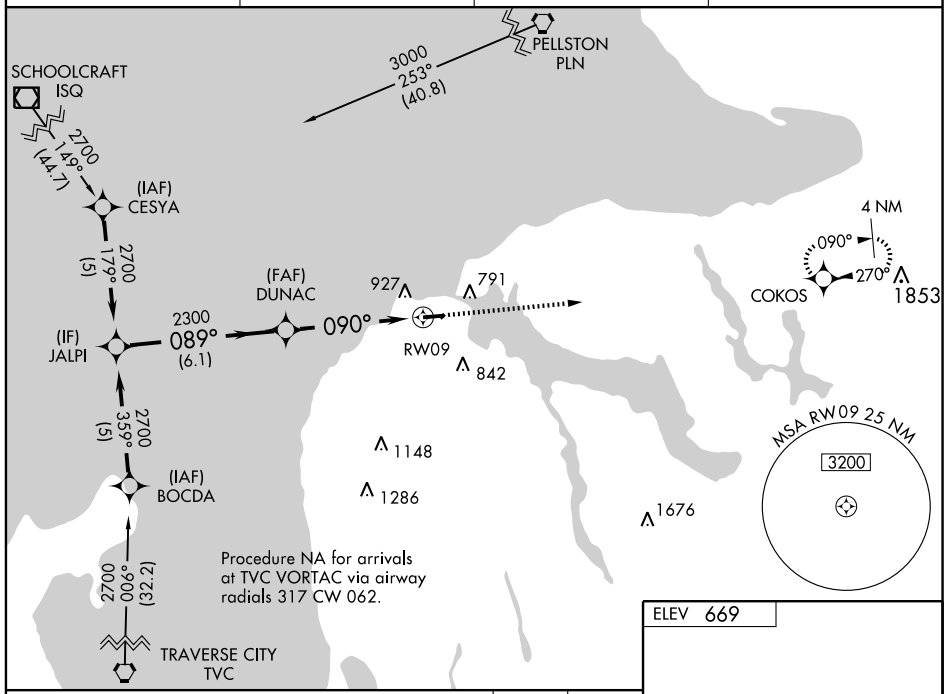
WAAS CH **97708** **W09A**	APP CRS **090°**	Rwy ldg **4550** TDZE **669** Apt Elev **669**

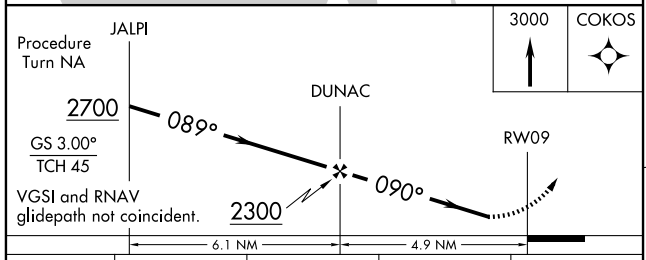
RNAV (GPS) RWY 9
CHARLEVOIX MUNI (CVX)

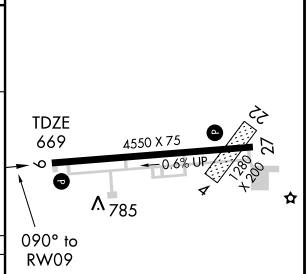
Circling to Rwy 4/22 NA at night. Baro-VNAV NA when using Pellston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Pellston altimeter setting and increase all DA 67 feet and all MDA 80 feet, increase LNAV/VNAV all Cats visibility ¼ mile, LNAV and Circling Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct COKOS and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	GCO
120.0	**134.6 354.05**	**122.8** (CTAF) L	**121.725**







CATEGORY	A	B	C	D
LPV DA	919-1 250 (300-1)			
LNAV/VNAV DA	1203-2 534 (600-2)			
LNAV MDA	1160-1 491 (500-1)		1160-1¼ 491 (500-1¼)	1160-1½ 491 (500-1½)
CIRCLING	1280-1 611 (700-1)		1280-1¾ 611 (700-1¾)	1280-2 611 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

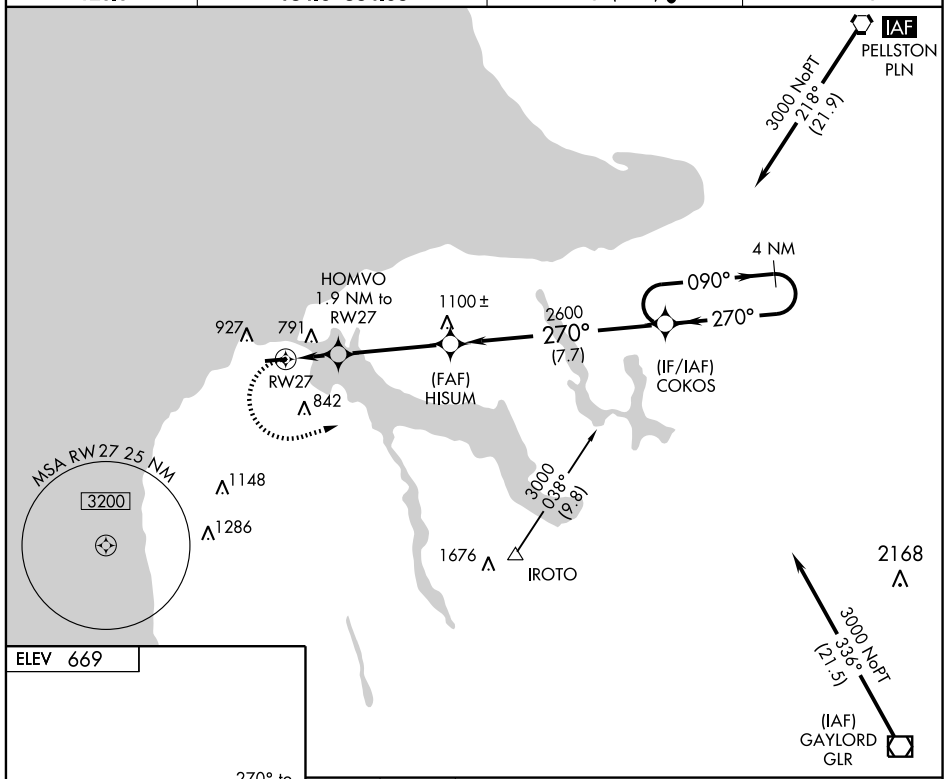
APP CRS	Rwy ldg	4550
270°	TDZE	662
	Apt Elev	669

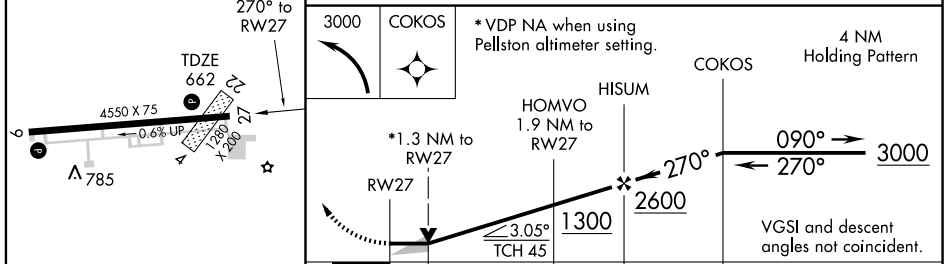
RNAV (GPS) RWY 27
CHARLEVOIX MUNI (CVX)

If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 80 feet.
DME/DME RNP-0.3 NA. Circling to Rwy 4/22 NA at night.
IAF ARM APPROACH MODE PRIOR TO IAf.

MISSED APPROACH: Climbing left turn to 3000 direct COKOS and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	GCO
120.0	134.6 354.05	122.8 (CTAF) L	121.725





CATEGORY	A	B	C	D
LNAV MDA	1100-1 438 (500-1)		1100-1¼ 438 (500-1¼)	1100-1½ 438 (500-1½)
CIRCLING	1280-1 611 (700-1)		1280-1¾ 611 (700-1¾)	1280-2 611 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

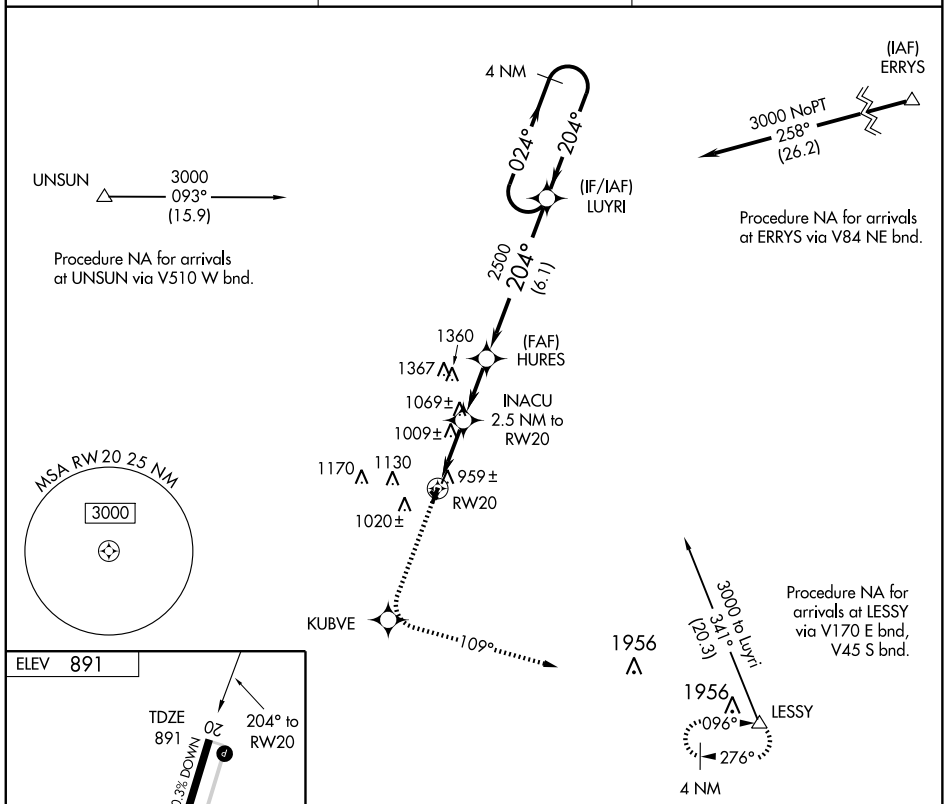
APP CRS	Rwy ldg	3500
204°	TDZE	891
	Apt Elev	891

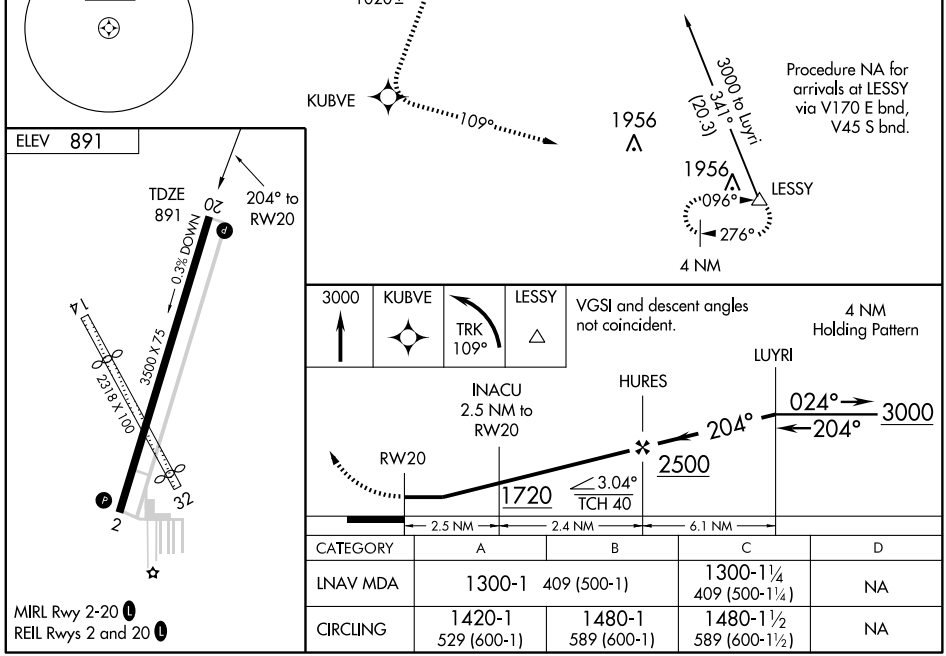
RNAV (GPS) RWY 20
CHARLOTTE / FITCH H. BEACH (FPK)

If local altimeter setting not received, use Capital City altimeter setting and increase all MDAs 60 feet. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct KUBVE and left turn via 109° track to LESSY and hold.

AWOS-3	LANSING APP CON	UNICOM
118.075	118.65 226.4	123.0 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1300-1 409 (500-1)		1300-1¼ 409 (500-1¼)	NA
CIRCLING	1420-1 529 (600-1)	1480-1 589 (600-1)	1480-1½ 589 (600-1½)	NA

MIRL Rwy 2-20 L
REIL Rwys 2 and 20 L

VORTAC LAN	APP CRS	Rwy ldg	3500
110.8	216°	TDZE	891
Chan 45		Apt Elev	891

VOR or GPS RWY 20

CHARLOTTE / FITCH H. BEACH (FPK)

T
A NA

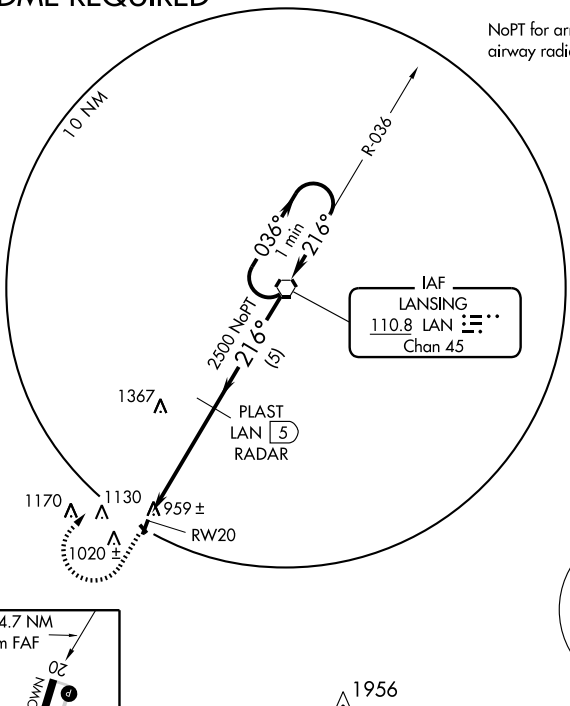
Use Lansing altimeter setting.

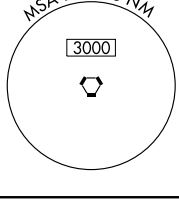
MISSED APPROACH: Climb to 2500 via LAN R-216 then right turn direct LAN VORTAC and hold.

AWOS-3	LANSING APP CON	UNICOM
118.075	118.65 226.4	123.0 (CTAF) L

RADAR or DME REQUIRED

NoPT for arrivals on LAN VORTAC airway radials 324 CW 115.

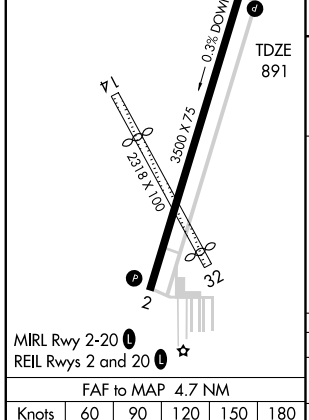




1956

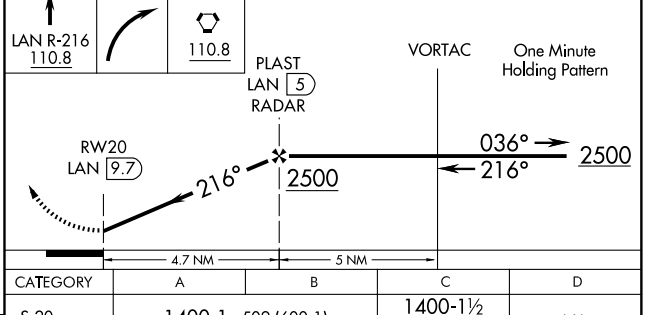
ELEV 891

216° 4.7 NM from FAF



MIRL Rwy 2-20 L
REIL Rwys 2 and 20 L

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-20	1400-1 509 (600-1)		1400-1½ 509 (600-1½)	NA
CIRCLING	1460-1 569 (600-1)	1520-1 629 (700-1)	1520-1¾ 629 (700-1¾)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
096°	TDZE	641
	Apt Elev	641

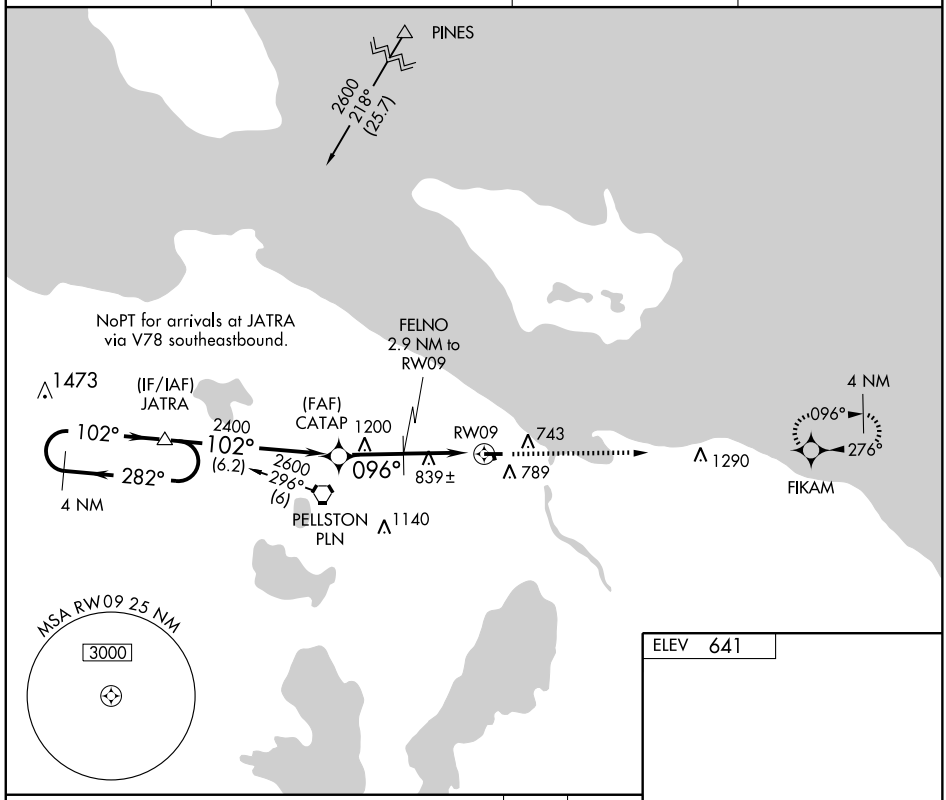
RNAV (GPS) RWY 9
CHEBOYGAN COUNTY (SLH)

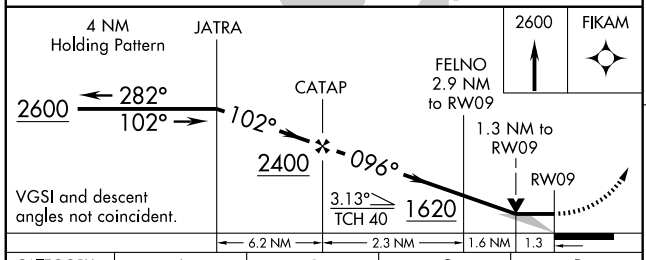
NA

If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 60 feet.
DME/DME RNP -0.3 NA.
VDP NA with Pellston altimeter setting.

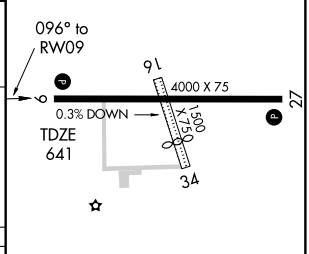
MISSED APPROACH: Climb to 2600 direct FIKAM and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





CATEGORY	A	B	C	D
LNAV MDA	1100-1 459 (500-1)		1100-1¼ 459 (500-1¼)	NA
CIRCLING	1140-1 499 (500-1)		1140-1½ 499 (500-1½)	NA



REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
276°	TDZE	641
	Apt Elev	641

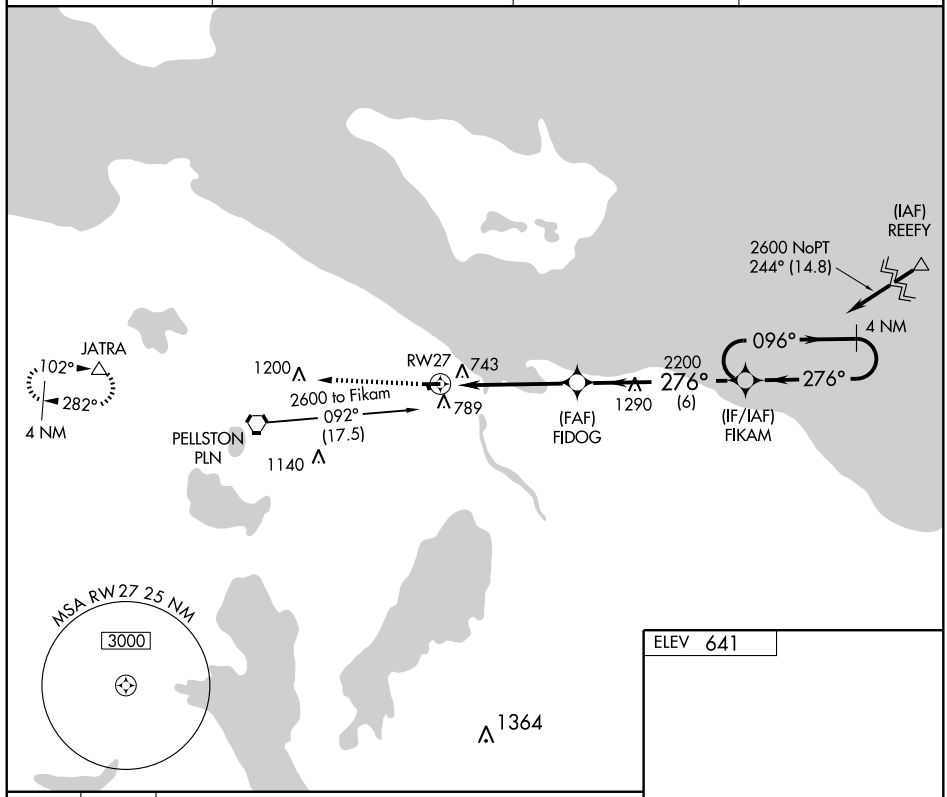
RNAV (GPS) RWY 27
CHEBOYGAN COUNTY (SLH)

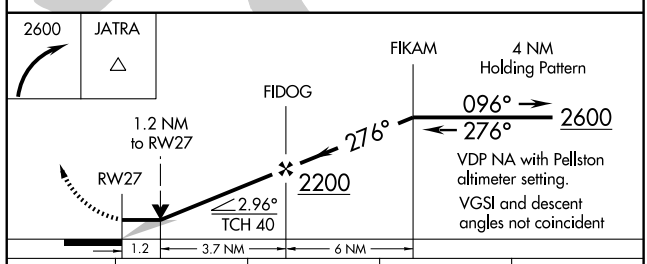
If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 60 feet. GPS or RNP -0.3 required. DME/DME RNP -0.3 NA.

NA

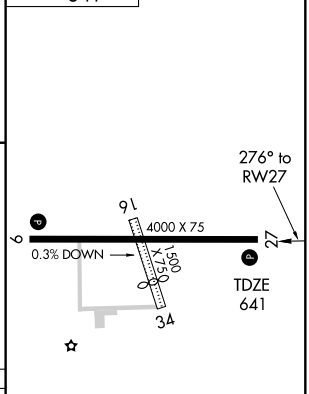
MISSED APPROACH: Climbing right turn to 2600 direct JATRA WP and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





CATEGORY	A	B	C	D
LNAV MDA	1060-1 419 (500-1)		1060-1¼ 419 (500-1¼)	NA
CIRCLING	1140-1 499 (500-1)		1140-1½ 499 (500-1½)	NA



REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

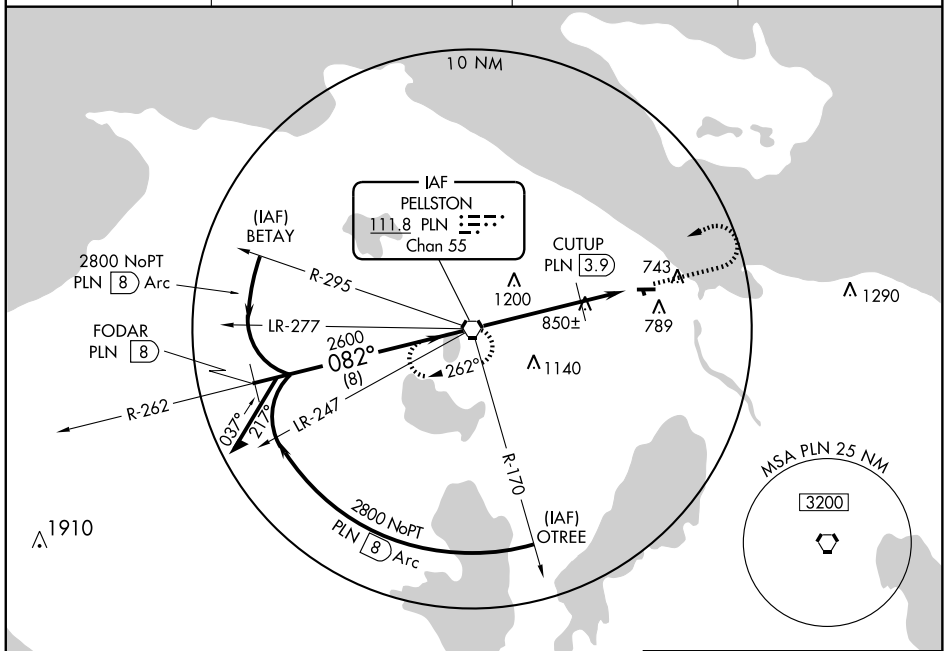
VORTAC PLN	APP CRS	Rwy ldg	4000
111.8	082°	TDZE	641
Chan 55		Apt Elev	641

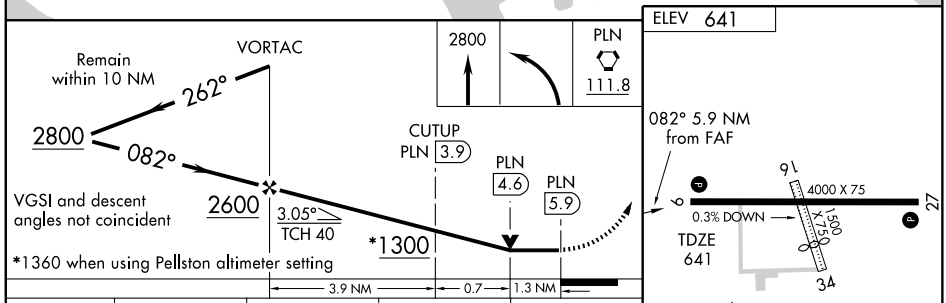
VOR RWY 9
CHEBOYGAN COUNTY (SLH)

If local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 60 feet.
NA
VDP NA when using Pellston altimeter setting.

MISSED APPROACH: Climb to 2800 then left turn direct PLN VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





CATEGORY	A	B	C	D
S-9	1300-1 659 (700-1)		1300-1¾ 659 (700-1¾)	NA
CIRCLING	1300-1 659 (700-1)		1300-1¾ 659 (700-1¾)	NA
DME MINIMUMS				
S-9	1100-1 459 (500-1)		1100-1¼ 459 (500-1¼)	NA
CIRCLING	1140-1 499 (500-1)		1140-1½ 499 (500-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MOP	APP CRS	Rwy ldg	N/A
110.6	004°	TDZE	N/A
Chan 43		Apt Elev	857

VOR or GPS-A
CLARE MUNI (48D)

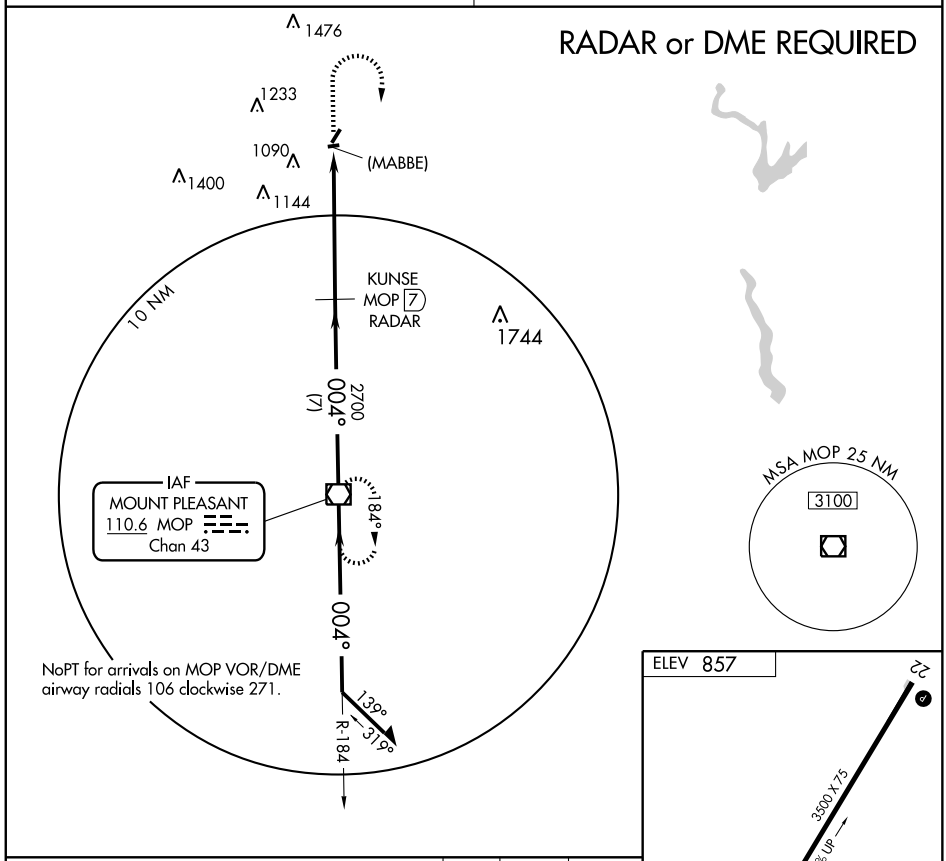
NA

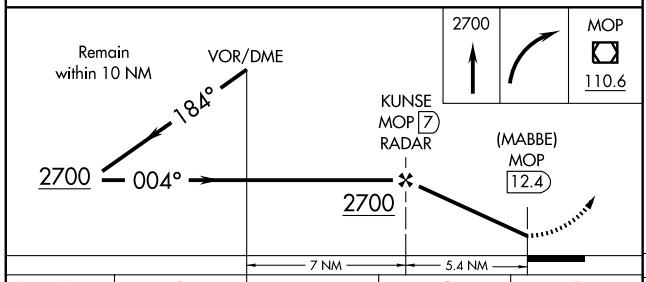
Use Saginaw altimeter setting.

MISSED APPROACH: Climb to 2700, then right turn direct MOP VOR/DME and hold.

SAGINAW APP CON ★
126.45 235.625

UNICOM
122.8 (CTAF) L





CATEGORY	A	B	C	D
CIRCLING	1580-1	723 (800-1)	NA	

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 56506 W07A	APP CRS 069°	Rwy ldg 5350 TDZE 959 Apt Elev 959

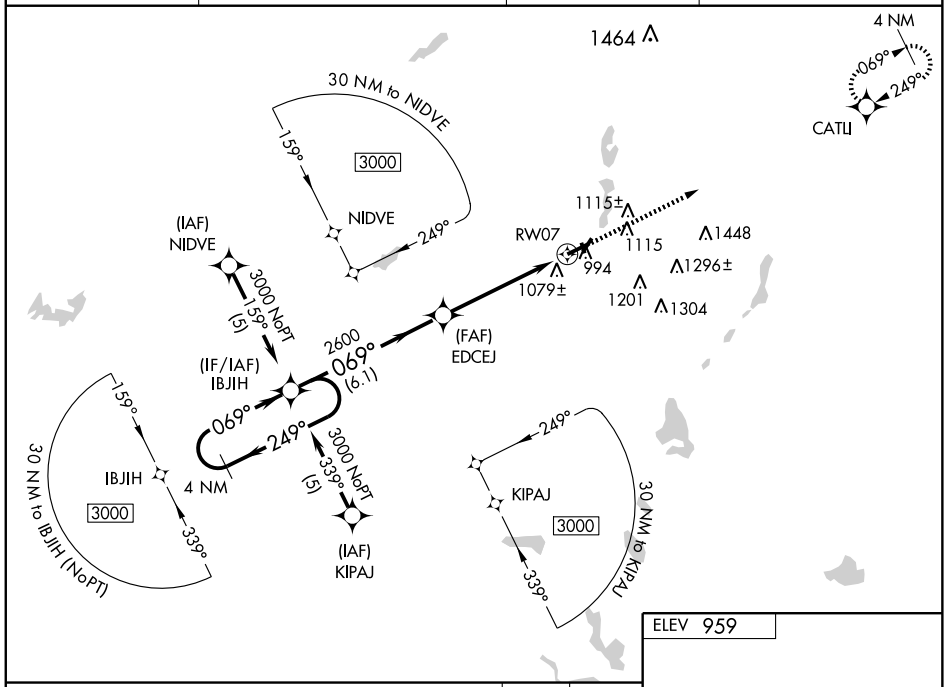
RNAV (GPS) RWY 7

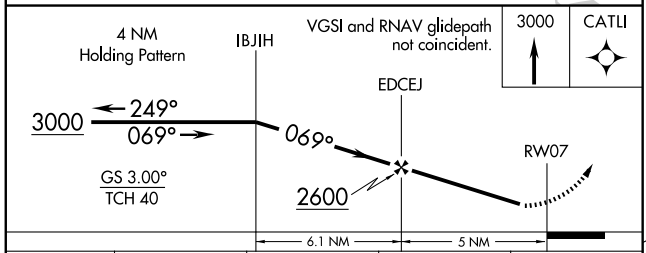
COLDWATER/BRANCH COUNTY MEMORIAL (OEB)

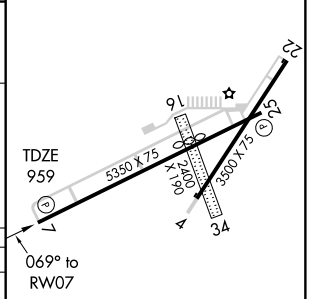
When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility ¼ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling to Rwy 16-34 NA.

MISSED APPROACH: Climb to 3000 direct CATLI and hold.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
118.125	121.2 340.9	121.725	122.7 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1307-1¼ 348 (400-1¼)			NA
LNAV/VNAV DA	1418-1¾ 459 (500-1¾)			NA
LNAV MDA	1420-1 461 (500-1)		1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1 461 (500-1)		1480-1½ 521 (600-1½)	NA

MIRL Rwys 4-22 and 7-25 L
REIL Rwy 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 99606 W25A	APP CRS 249°	Rwy ldg 5350 TDZE 959 Apt Elev 959

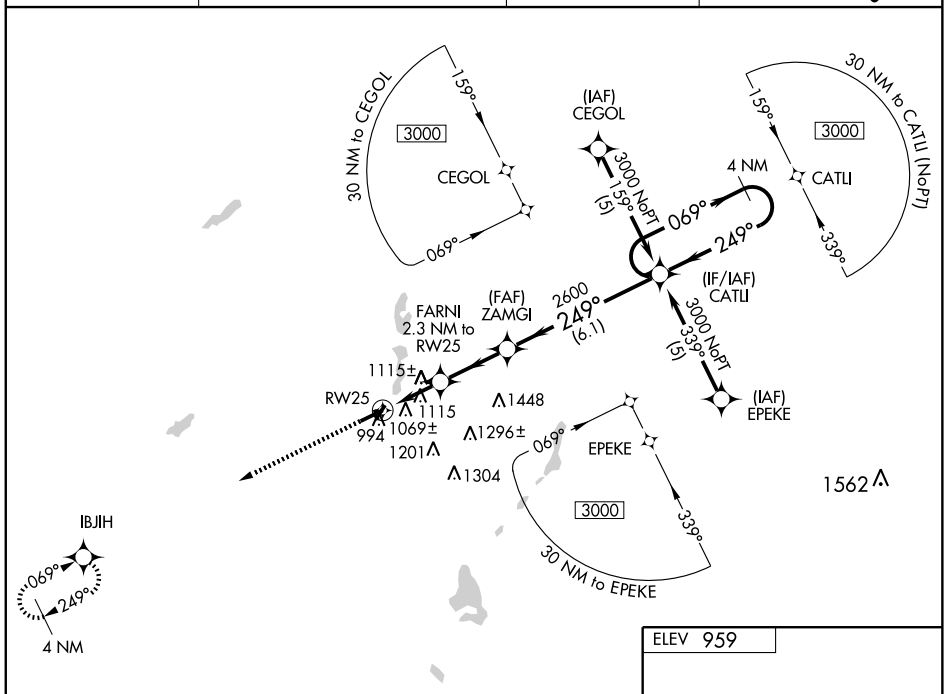
RNAV (GPS) RWY 25

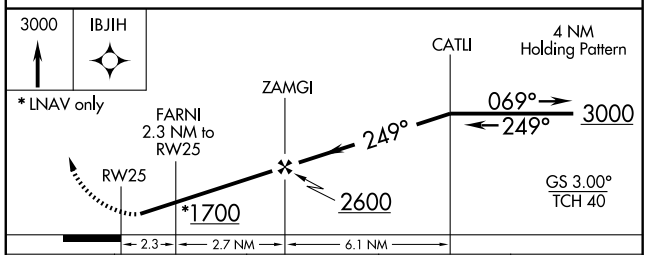
COLDWATER/BRANCH COUNTY MEMORIAL (OEB)

When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility ¼ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling to Rwy 16-34 NA.

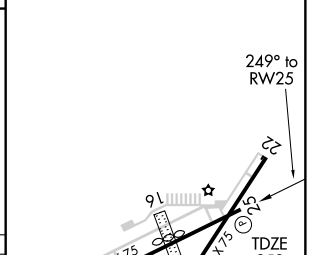
MISSED APPROACH: Climb to 3000 direct IBJIH and hold.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
118.125	121.2 340.9	121.725	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1306-1¼ 347 (400-1¼)			NA
LNAV/VNAV DA	1424-1¾ 465 (500-1¾)			NA
LNAV MDA	1420-1 461 (500-1)		1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1 461 (500-1)		1480-1½ 521 (600-1½)	NA



MIRL Rwys 4-22 and 7-25 L
REIL Rwy 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME LFD 111.2 Chan 49	APP CRS 244°	Rwy ldg 5350 TDZE 959 Apt Elev 959

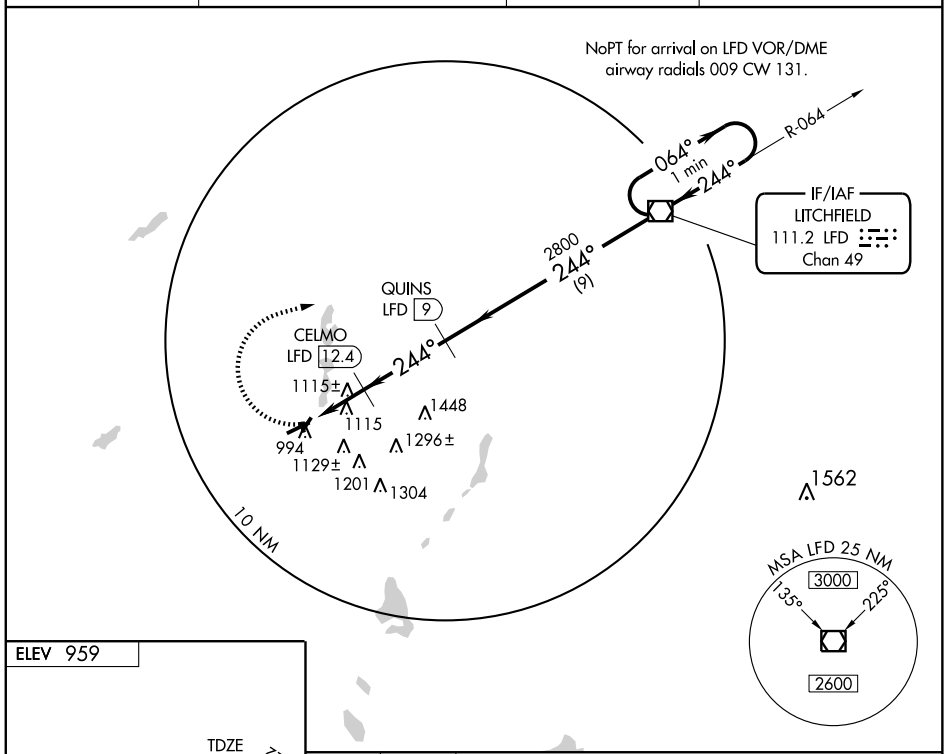
VOR/DME RWY 25

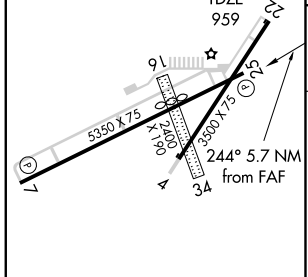
COLDWATER/ BRANCH COUNTY MEMORIAL (OEB)

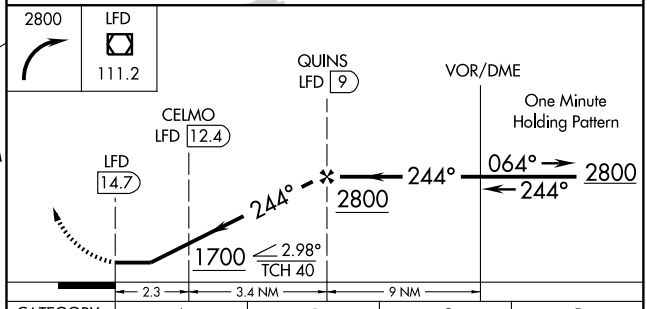
When local altimeter setting not received, use Sturgis altimeter setting and increase all MDAs 60 feet and S-25 Cat C visibility ¼ mile. Circling to Rwy 16-34 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing right turn to 2800 direct LFD VOR/DME and hold.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
118.125	121.2 340.9	121.725	122.7 (CTAF) L







CATEGORY	A	B	C	D
S-25	1420 - 1 461 (500-1)		1420 - 1¼ 461 (500-1¼)	NA
CIRCLING	1420 - 1 461 (500-1)		1480 - 1½ 521 (600-1½)	NA

MIRL Rwys 4-22 and 7-25 L
REIL Rwy 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME LFD 111.2 Chan 49	APP CRS 064°	Rwy ldg 5350 TDZE 959 Apt Elev 959

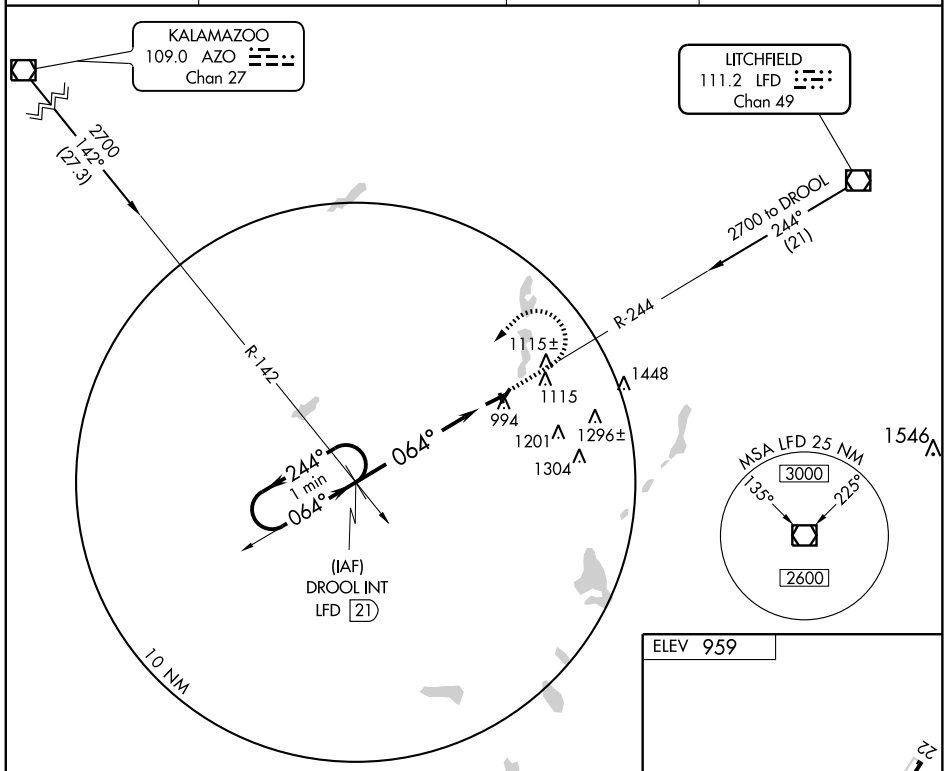
VOR RWY 7

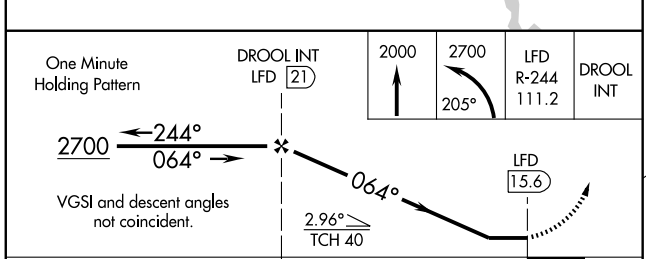
COLDWATER / BRANCH COUNTY MEMORIAL (OEB)

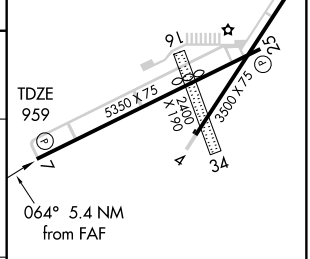
When local altimeter setting not received, use Sturgis altimeter setting and increase all MDAs 60 feet and S-7 Cat C visibility ¼ mile. Circling to Rwy 16-34 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via heading 205° and LFD R-244 to DROOL INT/LFD 21 DME and hold.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
118.125	121.2 340.9	121.725	122.7 (CTAF) L







CATEGORY	A	B	C	D
S-7	1440-1 481 (500-1)		1440-1¼ 481 (500-1¼)	NA
CIRCLING	1440-1 481 (500-1)		1480-1½ 521 (600-1½)	NA

MIRL Rwys 4-22 and 7-25 L
REIL Rwy 25 L

FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

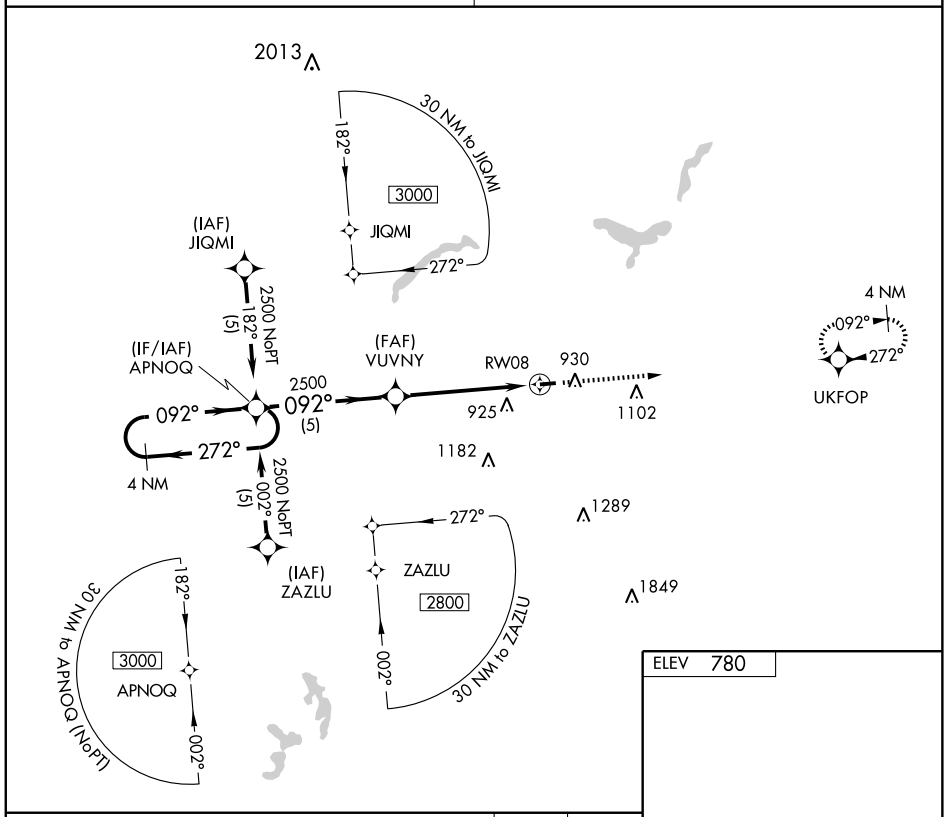
EC-1. 14 JAN 2010 to 11 FEB 2010

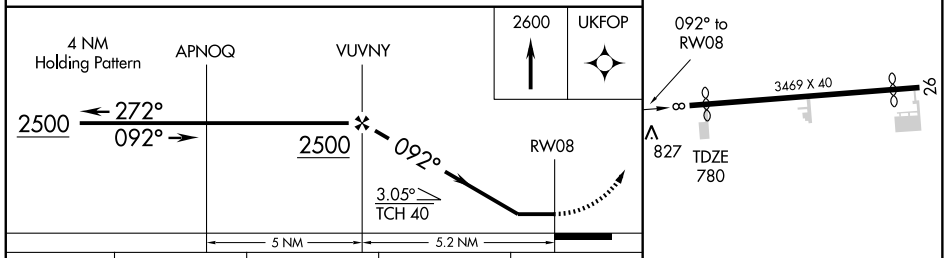
APP CRS	Rwy ldg	3299
092°	TDZE	780
	Apt Elev	780

RNAV (GPS) RWY 8

DAVISON / ATHELONE WILLIAMS MEMORIAL (6GØ)

NA Use Flint altimeter setting. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 2600 direct UKFOP WP and hold.
FLINT APP CON ★ **118.8 257.9**	CTAF **122.9**





CATEGORY	A	B	C	D
LNAV MDA	1280-1 500 (500-1)		1280-1¼ 500 (500-1¼)	NA
CIRCLING	1340-1¼ 560 (600-1¼)		1340-1½ 560 (600-1½)	NA

MIRL Rwy 8-26

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3101
272°	TDZE	780
	Apt Elev	780

RNAV (GPS) RWY 26

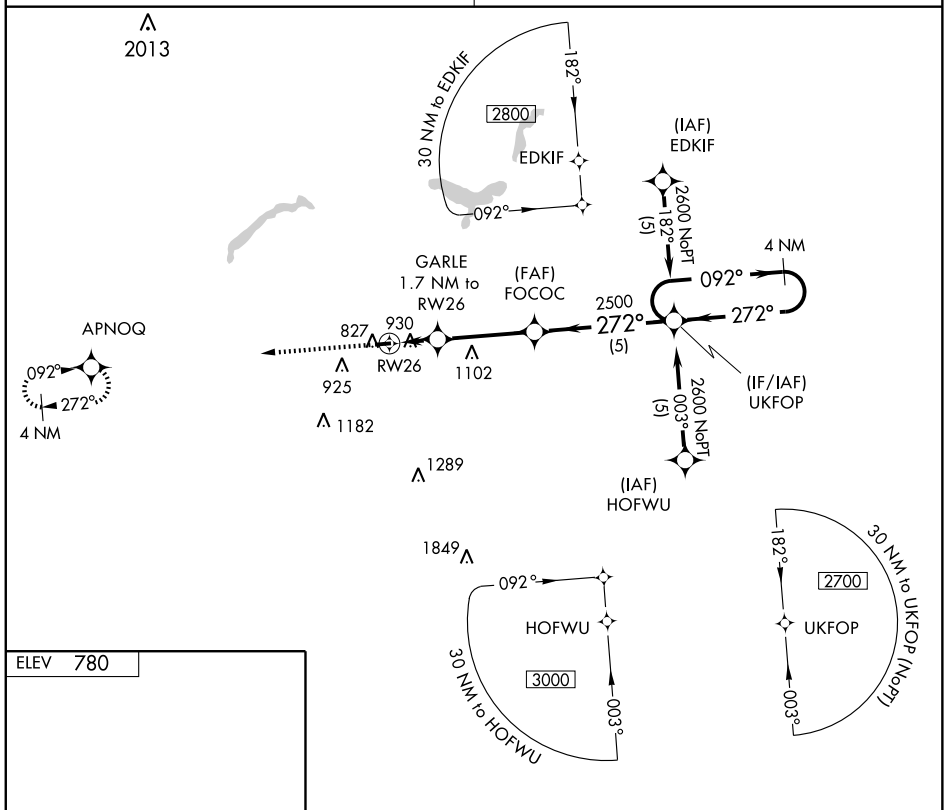
DAVISON / ATHELONE WILLIAMS MEMORIAL (6GØ)

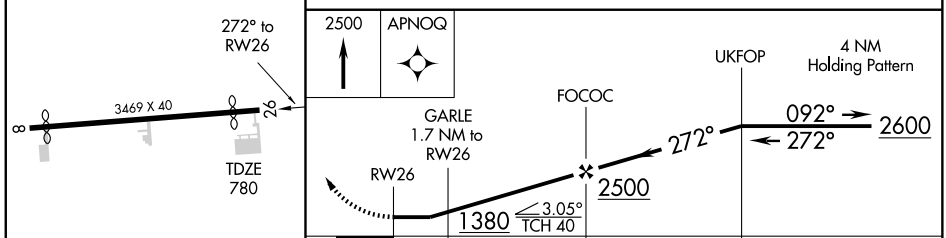
Use Flint altimeter setting.
DME/DME RNP-0.3 NA.

NA

MISSED APPROACH: Climb to 2500 direct APNOQ WP and hold.

FLINT APP CON *	CTAF
118.8 257.9	122.9





CATEGORY	A	B	C	D
LNAV MDA	1280-1 500 (500-1)		1280-1¼ 500 (500-1¼)	NA
CIRCLING	1340-1¼ 560 (600-1¼)		1340-1½ 560 (600-1½)	NA

MIRL Rwy 8-26

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT	APP CRS	Rwy ldg	3299
116.9	074°	TDZE	780
Chan 116		Apt Elev	780

VOR RWY 8

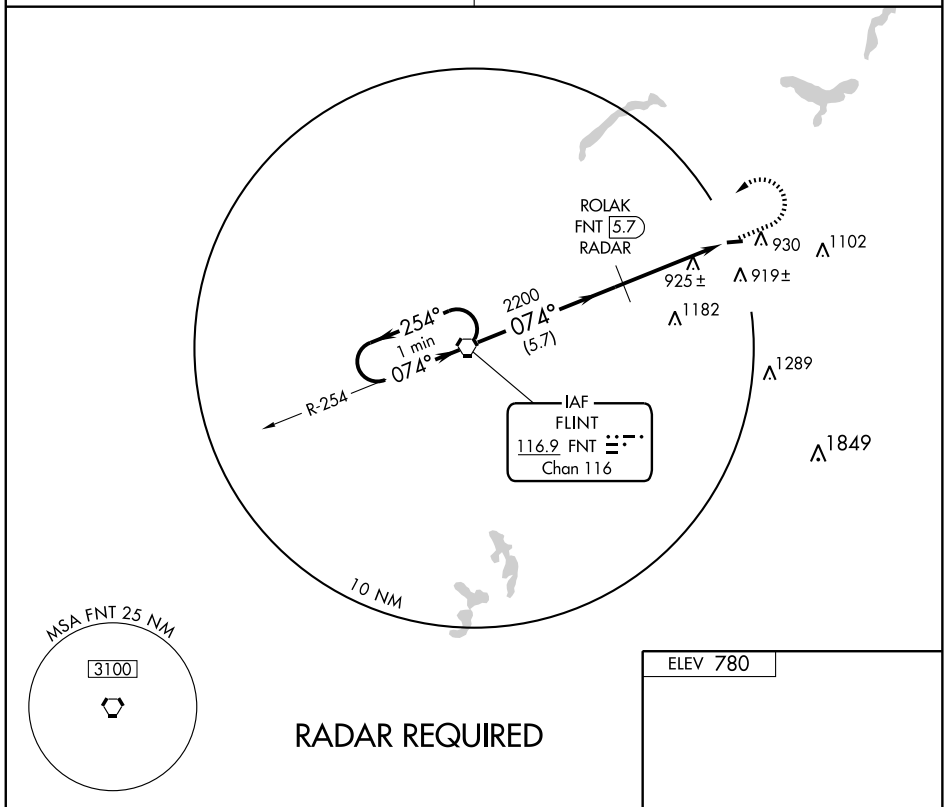
DAVISON / ATHELONE WILLIAMS MEMORIAL (6GØ)

NA

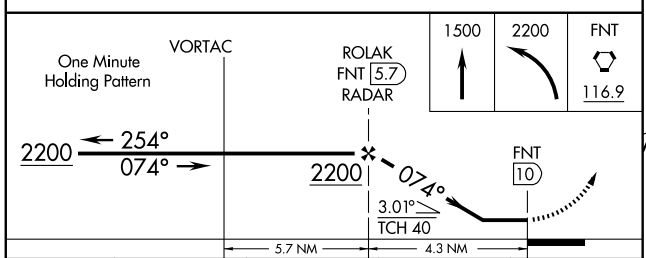
Use Flint altimeter setting.

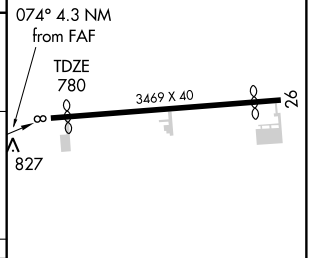
MISSED APPROACH: Climb to 1500, then climbing left turn to 2200 direct FNT VORTAC and hold.

FLINT APP CON *	CTAF
118.8 257.9	122.9



RADAR REQUIRED





MIRL Rwy 8-26

CATEGORY	A	B	C	D
S-8	1280-1 500 (500-1)		1280-1 ¼ 500 (500-1¼)	NA
CIRCLING	1340-1 560 (600-1)		1340-1 ½ 560 (600-1½)	NA

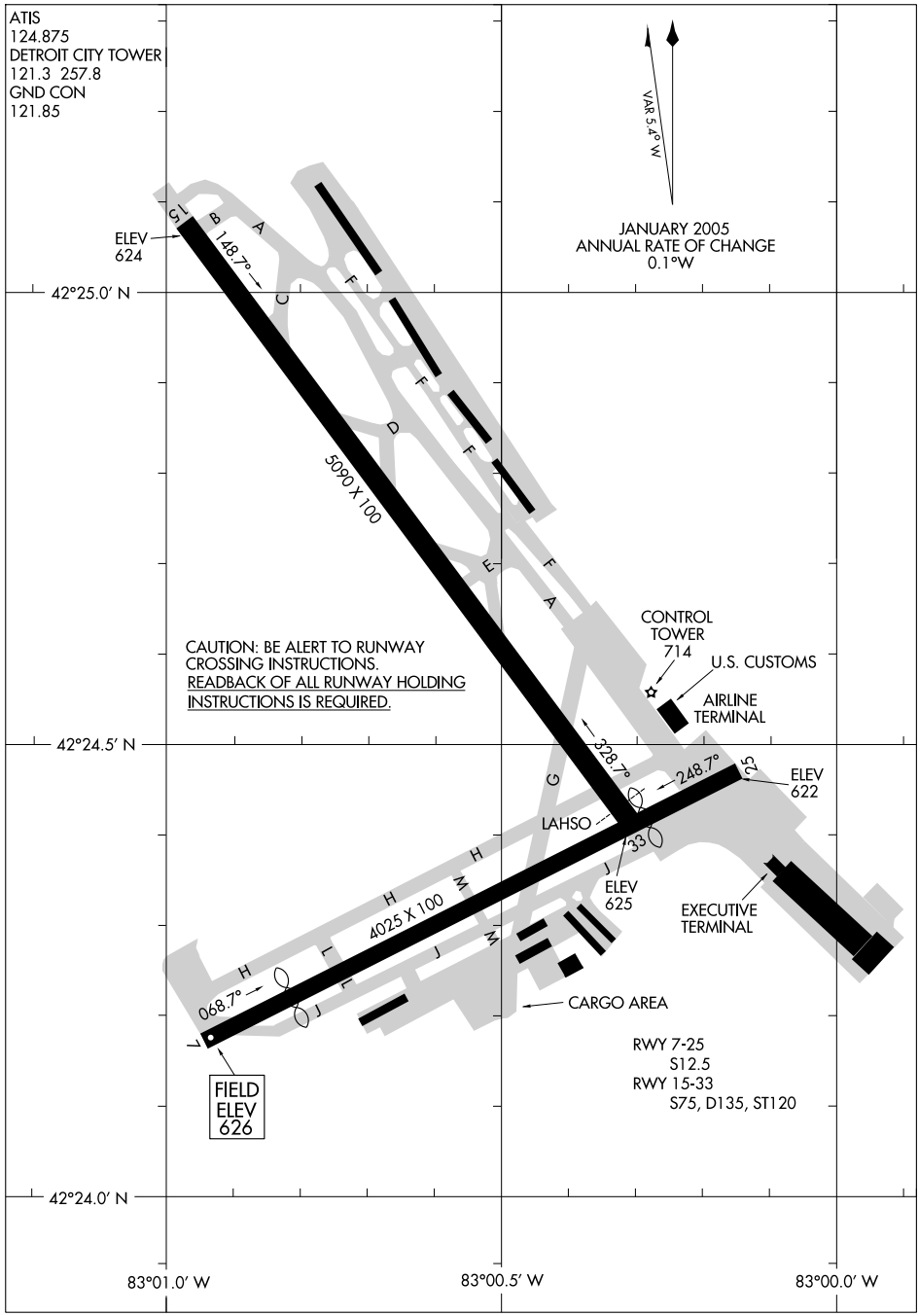
FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-118 (FAA)

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN



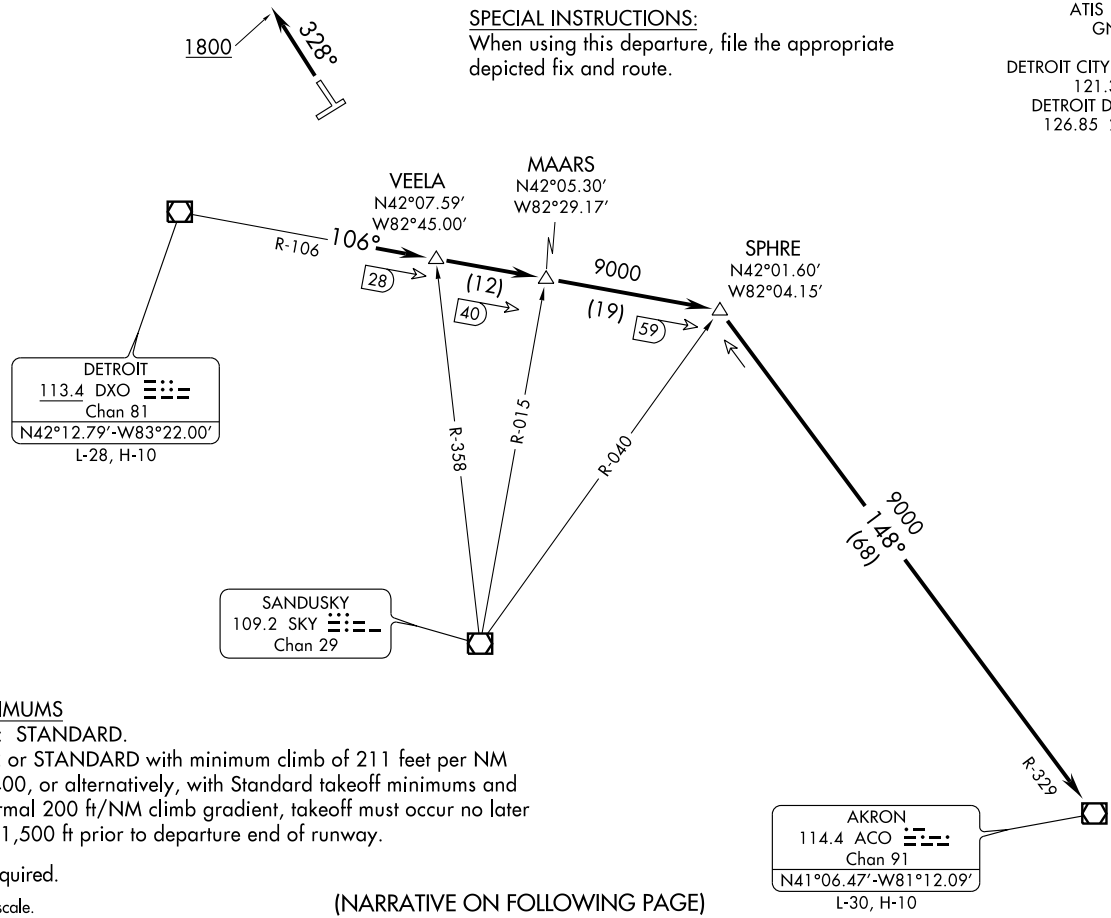
AKRON TWO DEPARTURE

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN

SI-118 (FAA)

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.



TAKE-OFF MINIMUMS
Rwys 7, 15, 33: STANDARD.
Rwy 25: 300-2 or STANDARD with minimum climb of 211 feet per NM to 1400, or alternatively, with Standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb heading 328° to 1800 before turning, expect radar vectors, thence. . . .

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

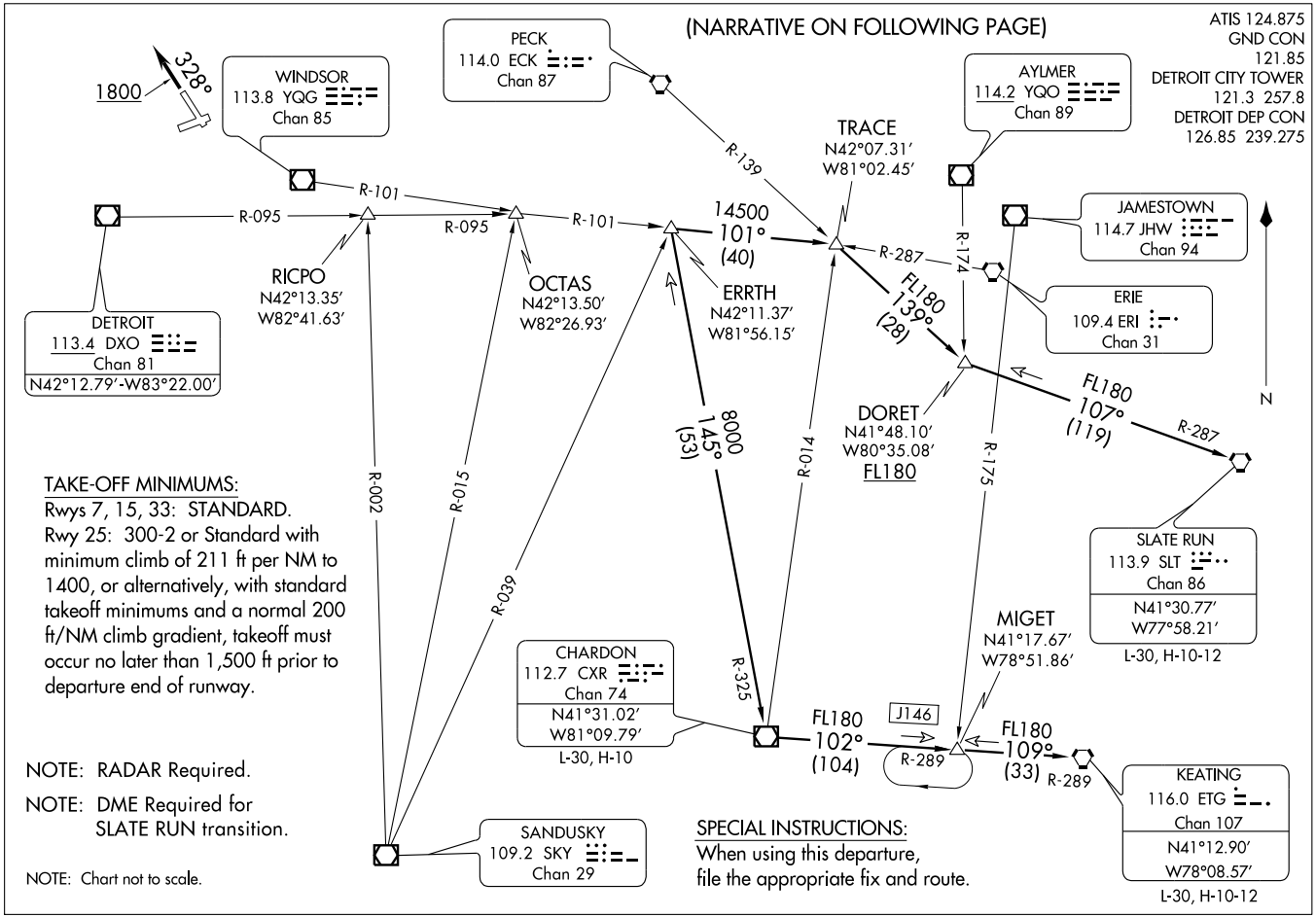
Rwy 7: Multiple Trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple Trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on Stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on Floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light Standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light Standard 227′ from DER, 105′ right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL on Floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on Pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple Trees beginning 589′ from DER, 221′ left of centerline, up to 69′ AGL/683′ MSL.
Multiple Trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL Building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple Trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple Trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on Building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on Stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL Stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light Standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474′ from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple Trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple Trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag Pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

ERRTH TWO DEPARTURE



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb heading 328° to 1800 expect radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.
TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/ flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.
KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.
SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105′ right of centerline, 33′ AGL/654′ MSL.
Antenna on bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL on floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline, up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474′ from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

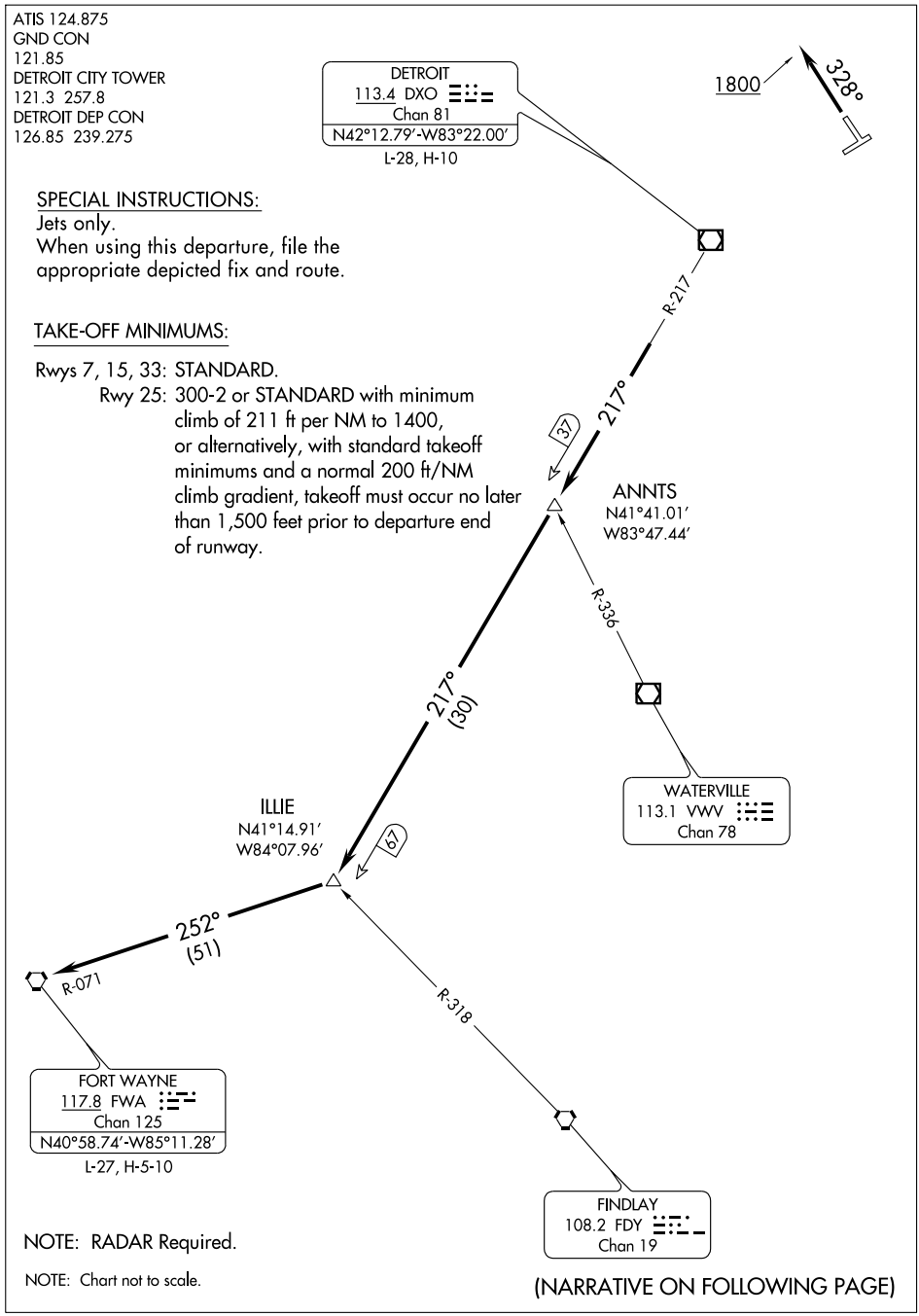
Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

FORT WAYNE THREE DEPARTURE

SL-118 (FAA)

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275



SPECIAL INSTRUCTIONS:

Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwys 7, 15, 33: STANDARD.

Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 feet prior to departure end of runway.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 33: Climb via heading 328° to 1800 before turning, expect radar vectors, thence. . . .

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to **ILLIE INT**, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105′ right of centerline, 33′ AGL/654′ MSL.
Antenna on bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

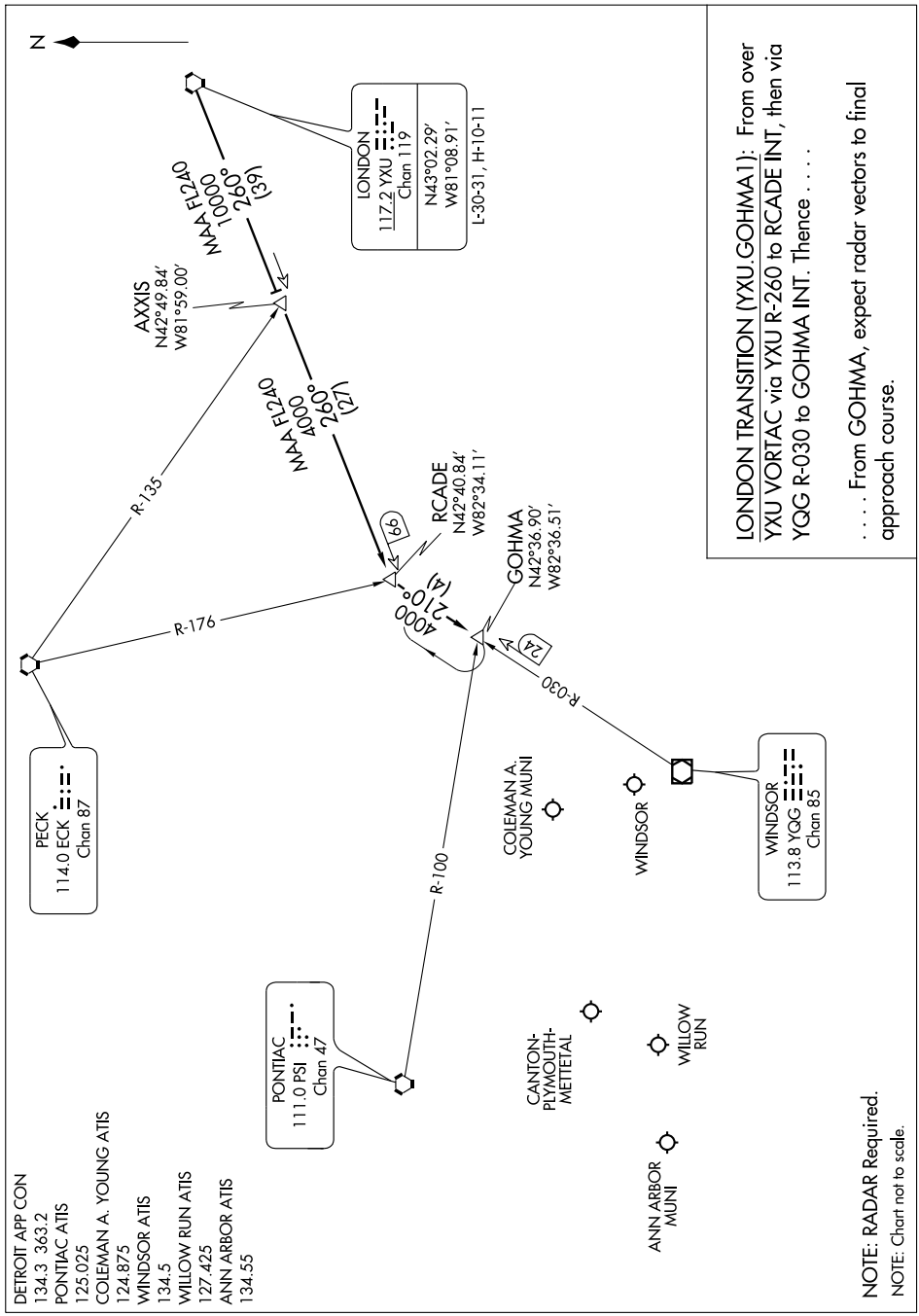
Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474′ from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

GOHMA ONE ARRIVAL

DETROIT, MICHIGAN



LOC I-VQM	APP CRS	Rwy ldg	5090
111.3	328°	TDZE	624
		Apt Elev	626

ILS or LOC RWY 33

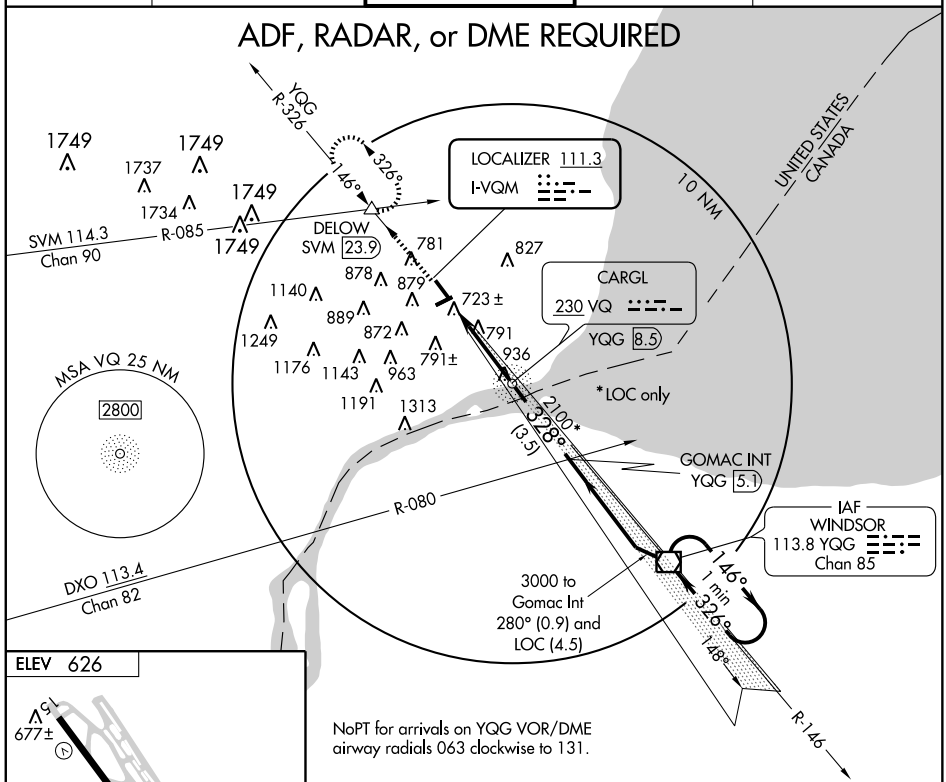
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

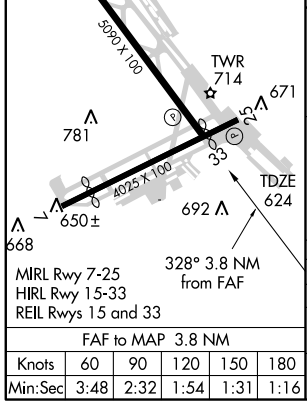
Inoperative table does not apply.

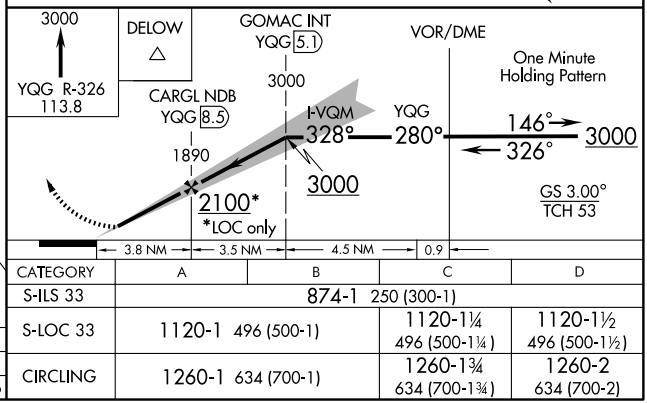
MISSED APPROACH: Climb to 3000 via YQG R-326 to DELOW Int and hold.

ATIS	DETROIT APP CON		DETROIT CITY TOWER		GND CON	UNICOM
124.875	126.85	363.2	121.3	257.8	121.85	122.95

ADF, RADAR, or DME REQUIRED







FAF to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16

CATEGORY	A	B	C	D
S-ILS 33	874-1 250 (300-1)			
S-LOC 33	1120-1 496 (500-1)		1120-1¼ 496 (500-1¼)	1120-1½ 496 (500-1½)
CIRCLING	1260-1 634 (700-1)		1260-1¾ 634 (700-1¾)	1260-2 634 (700-2)

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LOC I-DET	APP CRS	Rwy ldg	5090
111.3	148°	TDZE	624
		Apt Elev	626

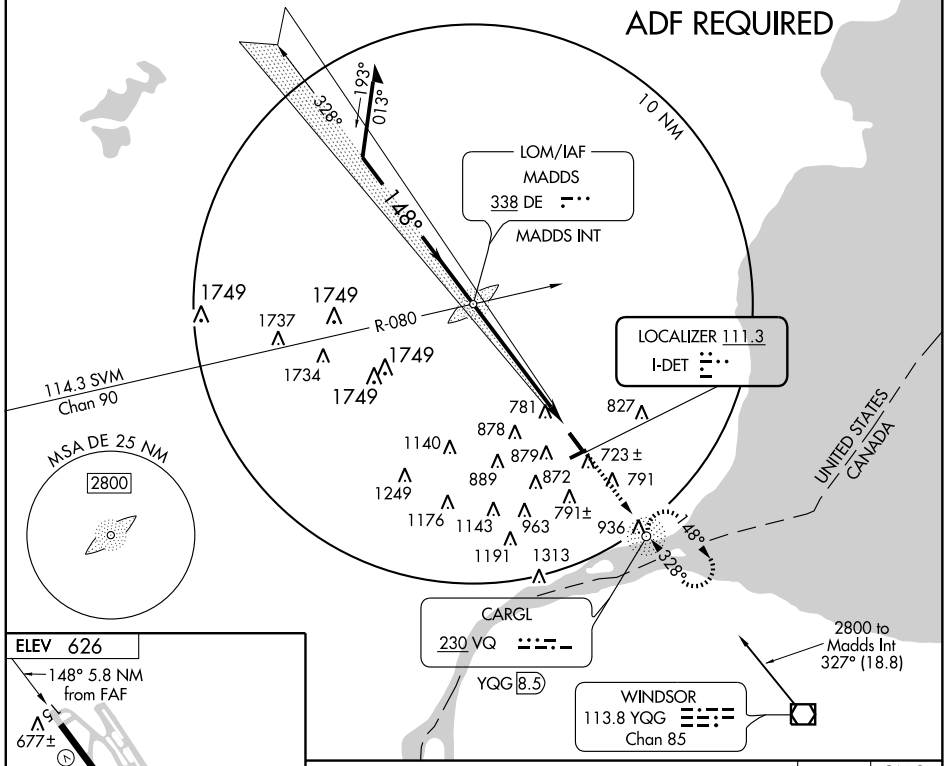
ILS RWY 15

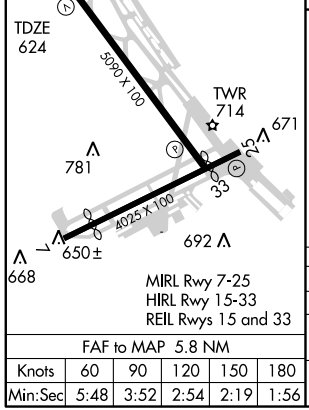
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

Inoperative table does not apply.
Air carrier landing visibility reduction for local conditions not authorized.

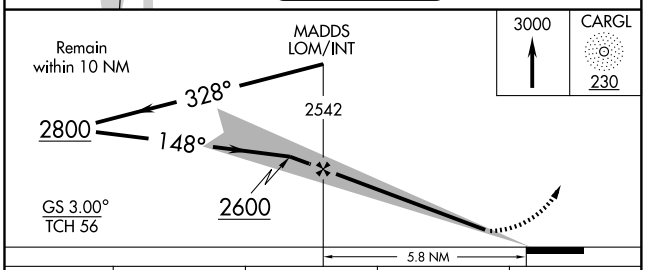
MISSED APPROACH: Climb to 3000 direct Cargl NDB/YQG 8.5 DME and hold.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON	UNICOM
124.875	126.85 363.2	121.3 257.8	121.85	122.95





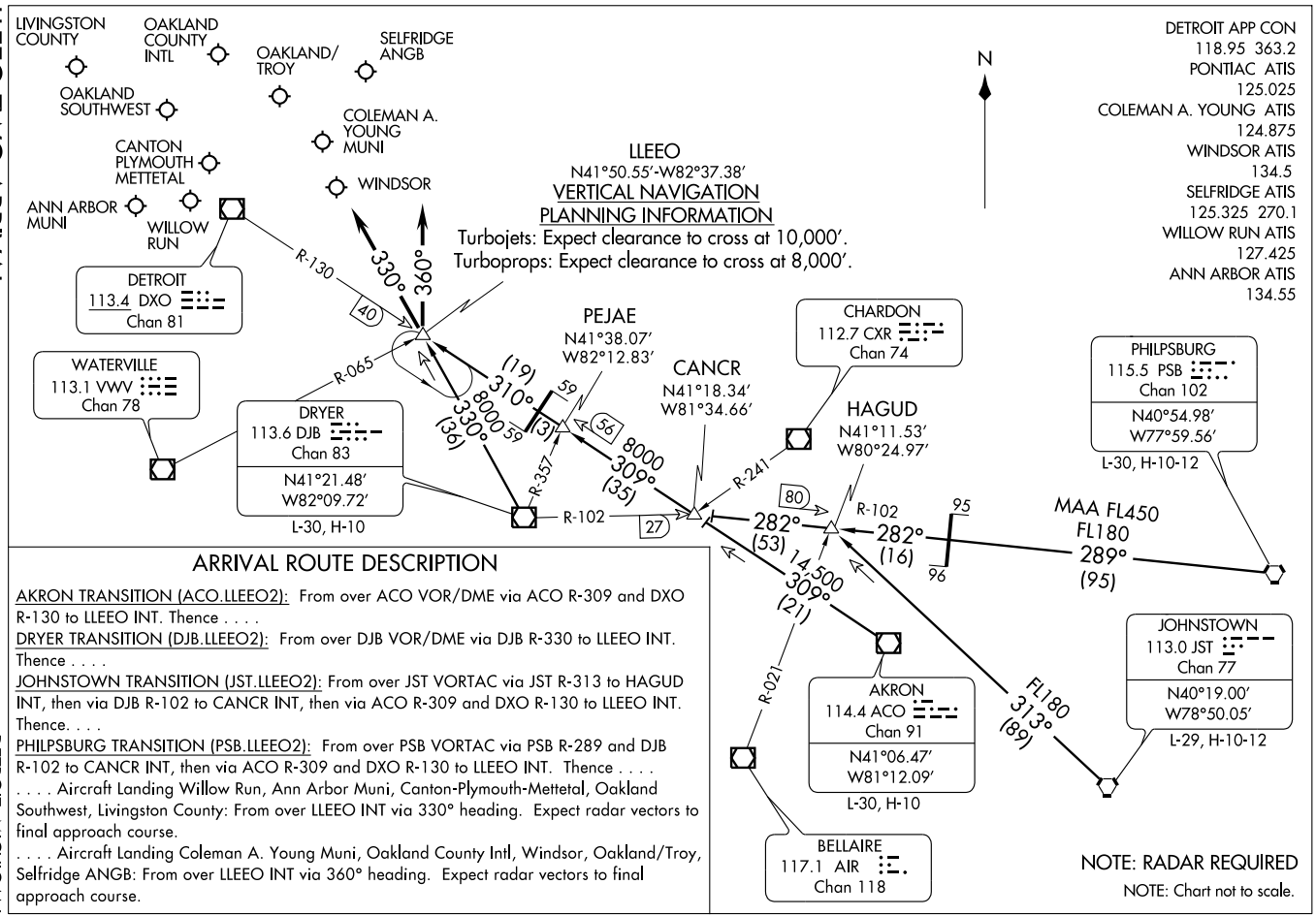
FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56



CATEGORY	A	B	C	D
S-ILS 15	874-1 250 (300-1)			
S-LOC 15	1160-1 536 (600-1)		1160-1½ 536 (600-1½)	1160-1¾ 536 (600-1¾)
CIRCLING	1260-1 634 (700-1)		1260-1¾ 634 (700-1¾)	1260-2 634 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

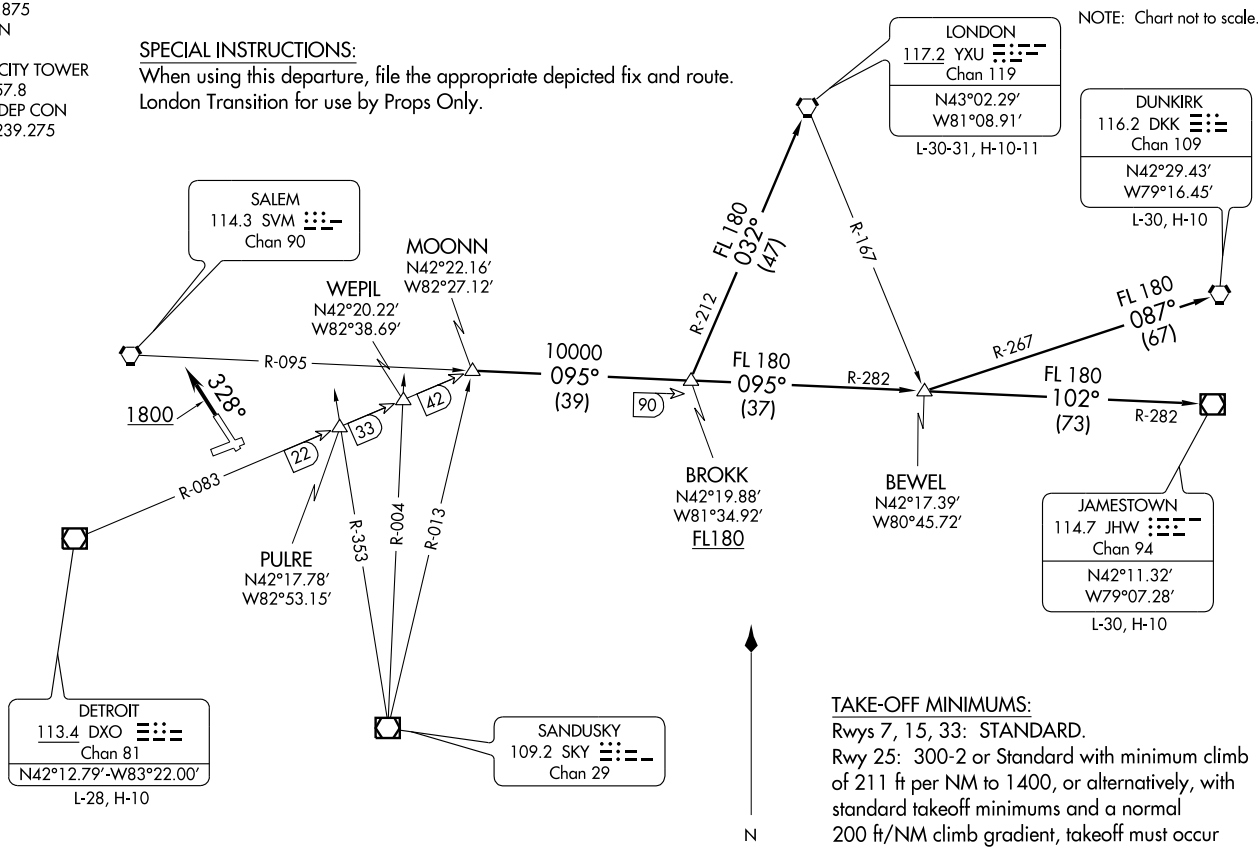
. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275

NOTE: Chart not to scale.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.
London Transition for use by Props Only.



TAKE-OFF MINIMUMS:
Rwys 7, 15, 33: STANDARD.
Rwy 25: 300-2 or Standard with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

(MOONN2.MOONN) 07354
MOONN TWO DEPARTURE
SL-118 (FAA)
DETROIT/COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb heading 328° to 1800′ before turning expect radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.
TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.
JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.
LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105 right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474 from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

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LOM DE	APP CRS	Rwy ldg	5090
338	148°	TDZE	624
		Apt Elev	626

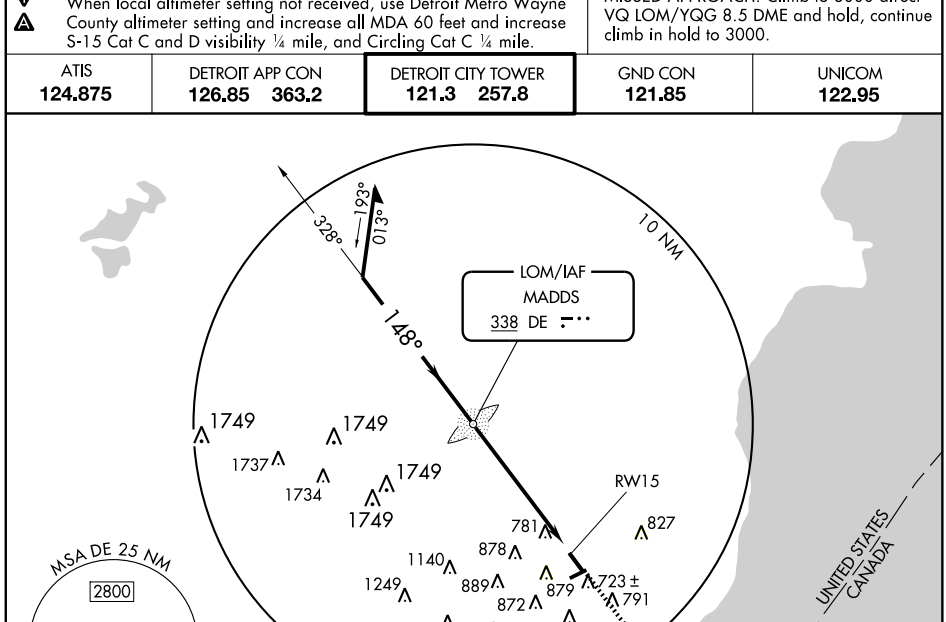
NDB RWY 15

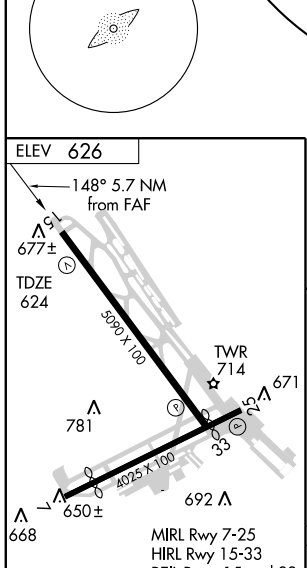
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

Visibility reduction by helicopters NA.
When local altimeter setting not received, use Detroit Metro Wayne County altimeter setting and increase all MDA 60 feet and increase S-15 Cat C and D visibility ¼ mile, and Circling Cat C ¼ mile.

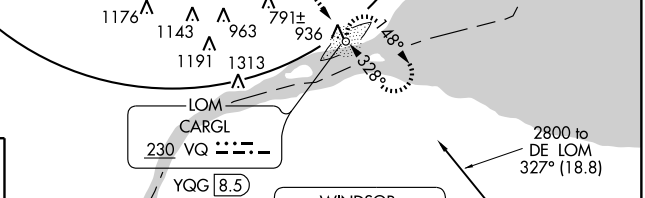
MISSED APPROACH: Climb to 3000 direct VQ LOM/YQG 8.5 DME and hold, continue climb in hold to 3000.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON	UNICOM
124.875	126.85 363.2	121.3 257.8	121.85	122.95





FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



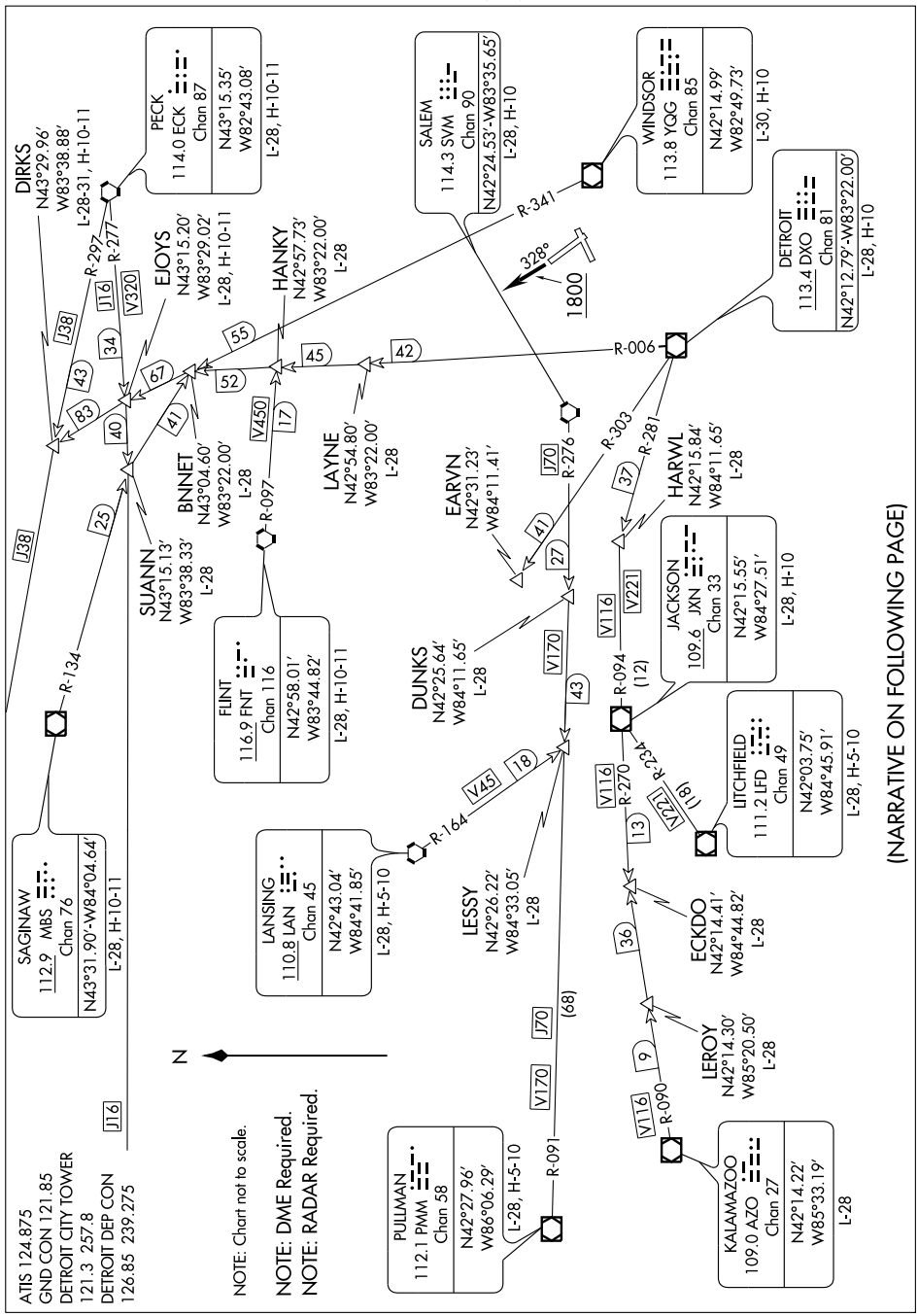
CATEGORY	A	B	C	D
S-15	1220-1 596 (600-1)		1220-1½ 596 (600-1½)	1220-1¾ 596 (600-1¾)
CIRCLING	1220-1 594 (600-1)		1220-1½ 594 (600-1½)	1220-2 594 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

PALACE THREE DEPARTURE

SL-118 (FAA)

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF MINIMUMS:
Rwy 7, 15, 33: STANDARD.
Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft over HARWL must file FL220 and below.

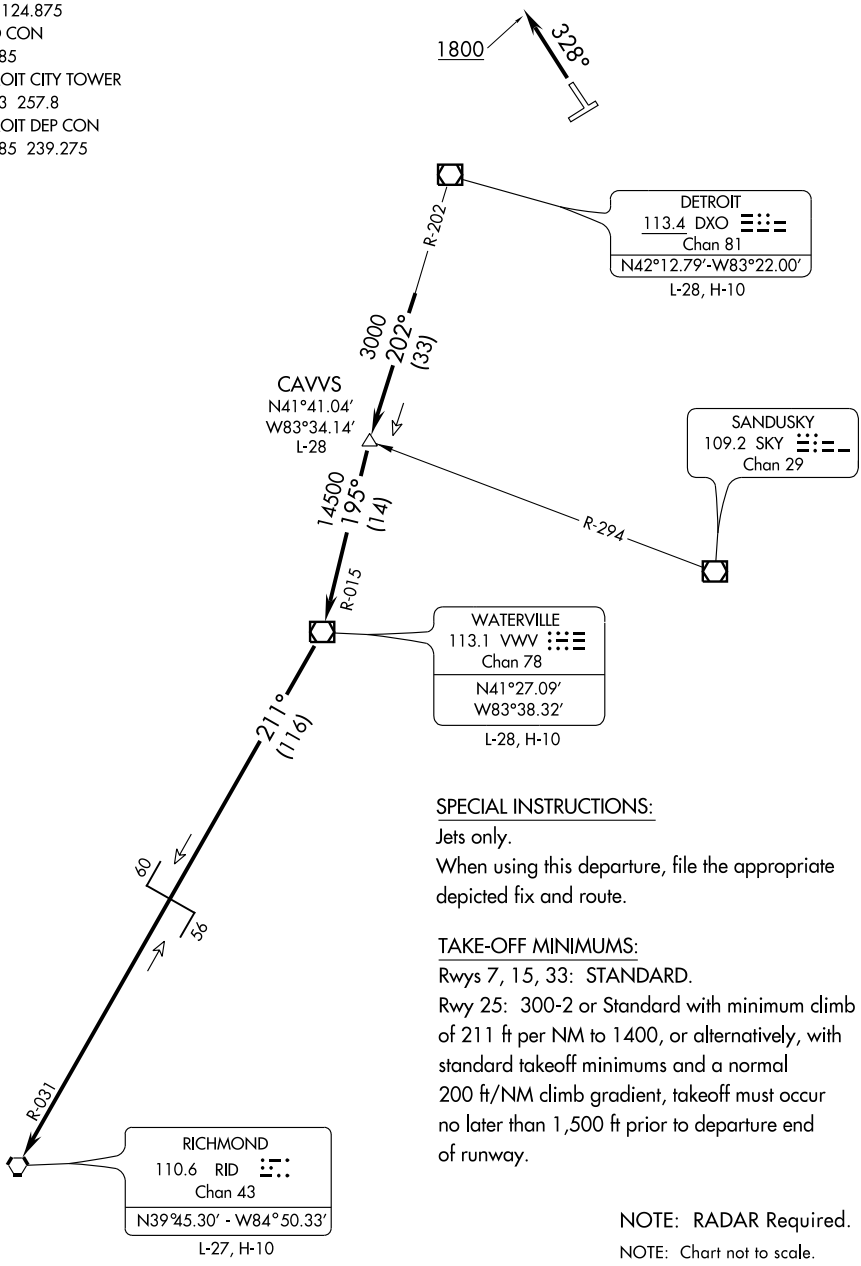
TAKE-OFF RWY 33: Climb heading 328° to 1800 before turning, expect radar vectors to join assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.
TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:
Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105′ right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.
Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.
Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474′ from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.
Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

RICHMOND FOUR DEPARTURE

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275



SPECIAL INSTRUCTIONS:

Jets only.

When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:

Rwys 7, 15, 33: STANDARD.

Rwy 25: 300-2 or Standard with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 33: Climb via heading 328° to 1800 before turning, expect radar vectors, thence ....
TAKE OFF ALL OTHER RWYS: Climb via assigned heading for radar vectors thence ....

....To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105′ right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3376′ from DER, 1118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2828′ from DER, 1225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9474 from DER, 2415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

WAAS CH 63211 W15A	APP CRS 148°	Rwy ldg 5090 TDZE 624 Apt Elev 626

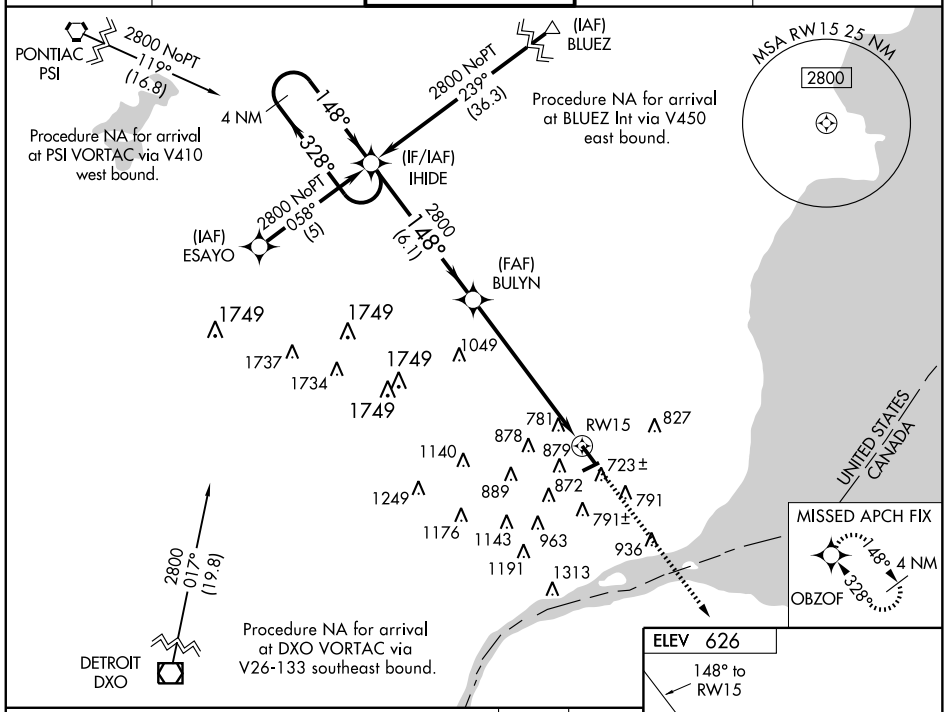
RNAV (GPS) RWY 15

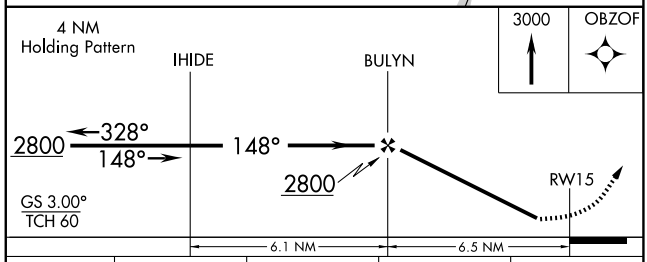
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

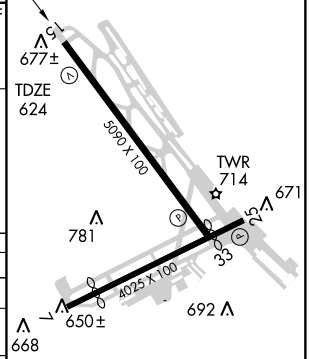
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all DA 48 feet and all MDA 60 feet, increase visibility LPV all Cats, LNAV/VNAV all Cats, and Circling Cat C ¼ mile. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct OBZOF and hold.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON	UNICOM
124.875	126.85 363.2	121.3 257.8	121.85	122.95







MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33

CATEGORY	A	B	C	D
LPV DA	927-1 303 (400-1)			
LNAV/VNAV DA	1079-1½ 455 (500-1½)			
LNAV MDA	1180-1 556 (600-1)		1180-1½ 556 (600-1½)	1180-1¾ 556 (600-1¾)
CIRCLING	1180-1 554 (600-1)		1180-1½ 554 (600-1½)	1200-2 574 (600-2)

WAAS CH 58211 W33A	APP CRS 328°	Rwy ldg 5090 TDZE 626 Apt Elev 626

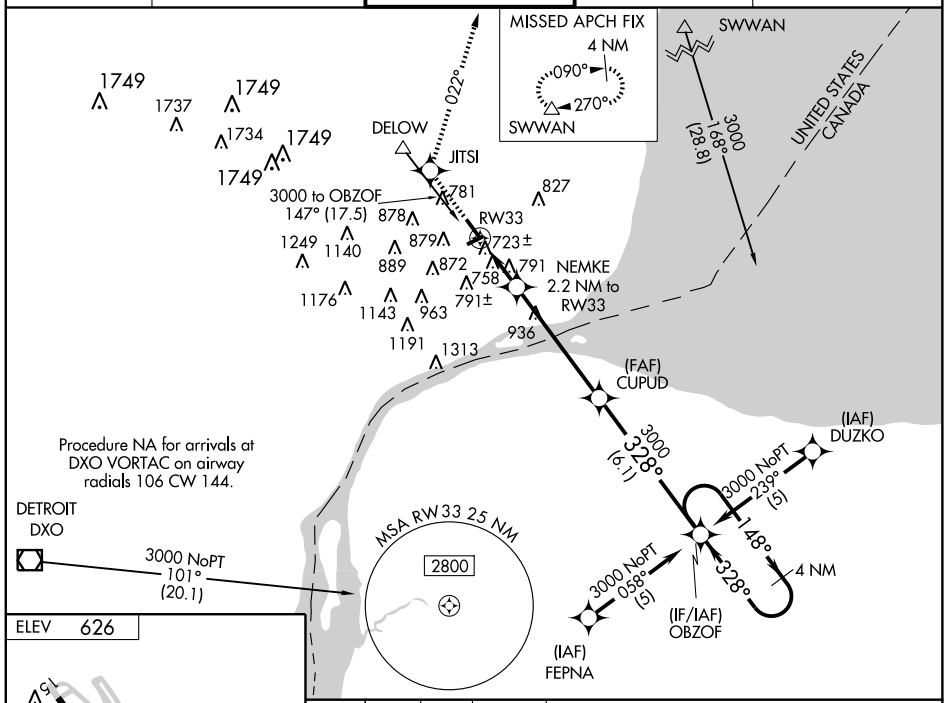
RNAV (GPS) RWY 33

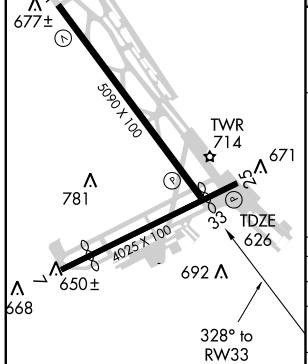
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

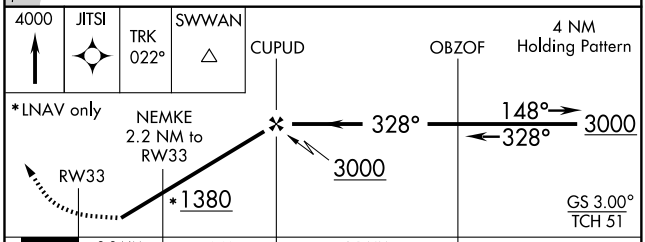
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all DA 48 feet and all MDA 60 feet; increase visibility LPV all Cats, LNAV Cat C and D and Circling Cat C ¼ mile. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct JITSI and via 022° track to SWWAN and hold.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON	UNICOM
124.875	126.85 363.2	121.3 257.8	121.85	122.95







CATEGORY	A	B	C	D
LPV DA	936-1 310 (400-1)			
LNAV/VNAV DA	1039-1½ 413 (500-1½)			
LNAV MDA	1100-1 474 (500-1)		1100-1¼ 474 (500-1¼)	1100-1½ 474 (500-1½)
CIRCLING	1180-1 554 (600-1)		1180-1½ 554 (600-1½)	1200-2 574 (600-2)

MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33

EC-1. 14 JAN 2010 to 11 FEB 2010

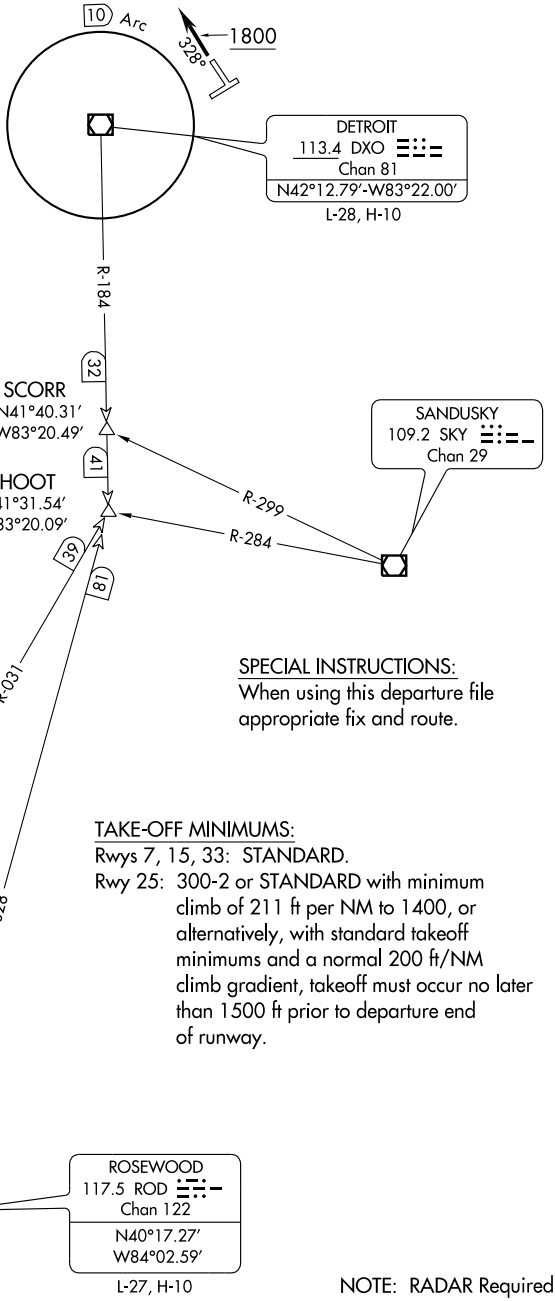
ROSEWOOD TWO DEPARTURE

SL-118 (FAA)

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN

(NARRATIVE ON FOLLOWING PAGE)

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275



SPECIAL INSTRUCTIONS:
When using this departure file appropriate fix and route.

TAKE-OFF MINIMUMS:
Rwys 7, 15, 33: STANDARD.
Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1500 ft prior to departure end of runway.

NOTE: Chart not to scale.

NOTE: RADAR Required.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 33: Climb heading 328 to 1800 before turning expect vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light standard 227′ from DER, 105 right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474 from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

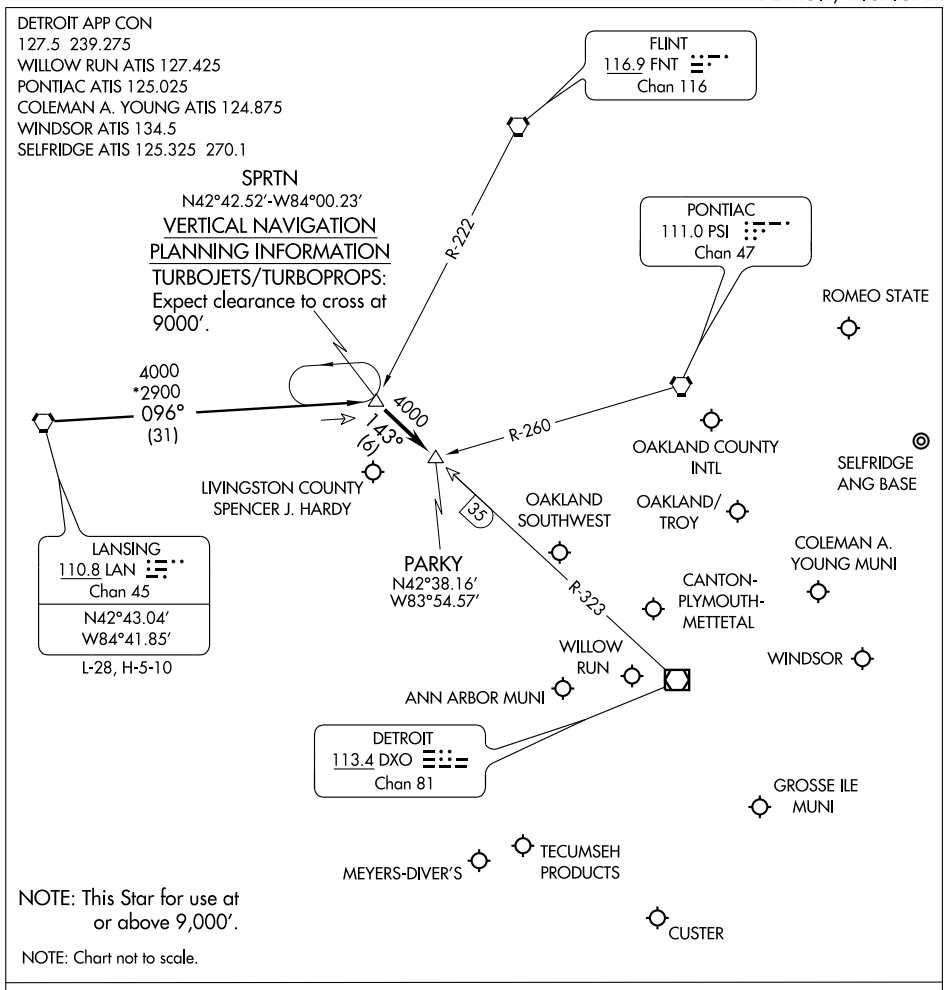
EC-1, 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

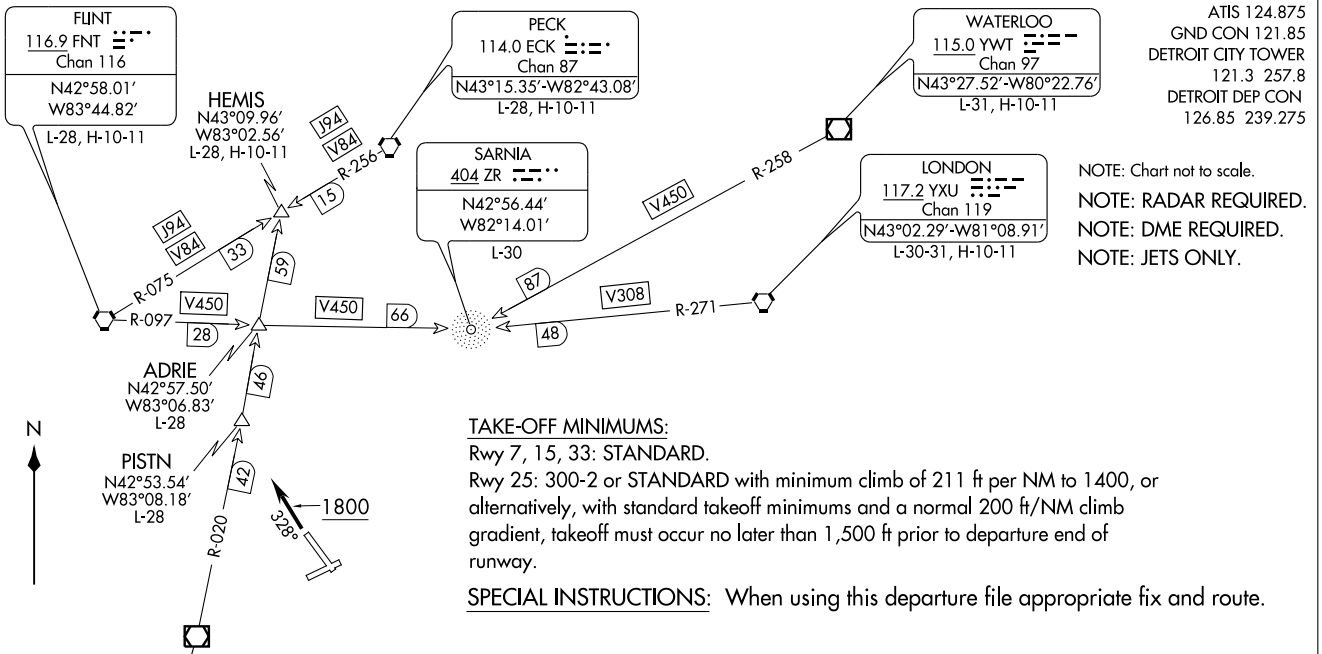
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

ST. CLAIR THREE DEPARTURE

DETROIT/ COLEMAN A. YOUNG MUNI (DET)
DETROIT, MICHIGAN



ATIS 124.875
GND CON 121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
126.85 239.275

NOTE: Chart not to scale.

NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: JETS ONLY.

TAKE-OFF MINIMUMS:
Rwy 7, 15, 33: STANDARD.
Rwy 25: 300-2 or STANDARD with minimum climb of 211 ft per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,500 ft prior to departure end of runway.

SPECIAL INSTRUCTIONS: When using this departure file appropriate fix and route.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAY 33: Climb heading 328° to 1800 expect radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.
TAKE-OFF ALL OTHER RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 7: Multiple Trees beginning 232′ from DER, 20′ left of centerline, up to 60′ AGL/687′ MSL.
Multiple Trees beginning 283′ from DER, 44′ right of centerline, up to 56′ AGL/680′ MSL.
Stack 533′ from DER, 66′ right of centerline, 50′ AGL/671′ MSL.
OL on Stack on Bldg 566′ from DER, 18′ right of centerline, 50′ AGL/671′ MSL.
OL on Floodlight 622′ from DER, 104′ left of centerline, 41′ AGL/668′ MSL.
Light Standard 149′ from DER, 138′ left of centerline, 37′ AGL/654′ MSL.
Light Standard 227′ from DER, 105 right of centerline, 33′ AGL/654′ MSL.
Antenna on Bldg 936′ from DER, 84′ right of centerline, 43′ AGL/670′ MSL.
OL Floodlight 909′ from DER, 96′ right of centerline, 41′ AGL/668′ MSL.
Pole 466′ from DER, 198′ right of centerline, 30′ AGL/654′ MSL.
OL on Pole 132′ from DER, on centerline, 16′ AGL/637′ MSL.

Rwy 15: Multiple Trees beginning 589′ from DER, 221′ left of centerline up to 69′ AGL/683′ MSL.
Multiple Trees beginning 299′ from DER, 289′ right of centerline, up to 52′ AGL/679′ MSL.
Ant on APBN 662′ from DER, 667′ left of centerline, 81′ AGL/695′ MSL.
Pipe on OL Bldg 783′ from DER, 597′ left of centerline, 62′ AGL/676′ MSL.
OL on Bldg 1,473′ from DER, 556′ right of centerline, 68′ AGL/692′ MSL.
Tower 3,376′ from DER, 1,118′ right of centerline, 103′ AGL/723′ MSL.
Antenna on Bldg 803′ from DER, 522′ right of centerline, 35′ AGL/656′ MSL.
Building 3,749′ from DER, 569′ left of centerline, 114′ AGL/723′ MSL.
Floodlight on Bldg 1,611′ from DER, 657′ left of centerline, 53′ AGL/667′ MSL.
Rod on OL Building 450′ from DER, 317′ left of centerline, 20′ AGL/637′ MSL.

Rwy 25: Tower 2,828′ from DER, 1,225′ left of centerline, 141′ AGL/770′ MSL.
Multiple Trees beginning 909′ from DER, 133′ left of centerline, up to 76′ AGL/703′ MSL.
Multiple Trees beginning 334′ from DER, 132′ right of centerline, 58′ AGL/685′ MSL.
OL on Building 48′ from DER, 240′ left of centerline, 41′ AGL/662′ MSL.
Railroad 1′ from DER, 126′ left of centerline, 29′ AGL/650′ MSL.
OL on Stack 454′ from DER, 45′ left of centerline, 35′ AGL/659′ MSL.
Railroad 190′ from DER, 40′ left of centerline, 29′ AGL/650′ MSL.
OL Stack on Bldg 949′ from DER, 44′ left of centerline, 41′ AGL/668′ MSL.
Stack 958′ from DER, 12′ left of centerline, 41′ AGL/668′ MSL.
Light Standard 701′ from DER, 145′ right of centerline, 26′ AGL/653′ MSL.
Stack 9,474 from DER, 2,415′ left of centerline, 241′ AGL/872′ MSL.

Rwy 33: Multiple Trees beginning 113′ from DER, 118′ left of centerline, up to 73′ AGL/694′ MSL.
Multiple Trees beginning 572′ from DER, 84′ right of centerline, up to 92′ AGL/709′ MSL.
Flag Pole 963′ from DER, 379′ left of centerline, 28′ AGL/658′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

VOR/DME YQG	APP CRS	Rwy ldg	5090
113.8	326°	TDZE	626
Chan 85		Apt Elev	626

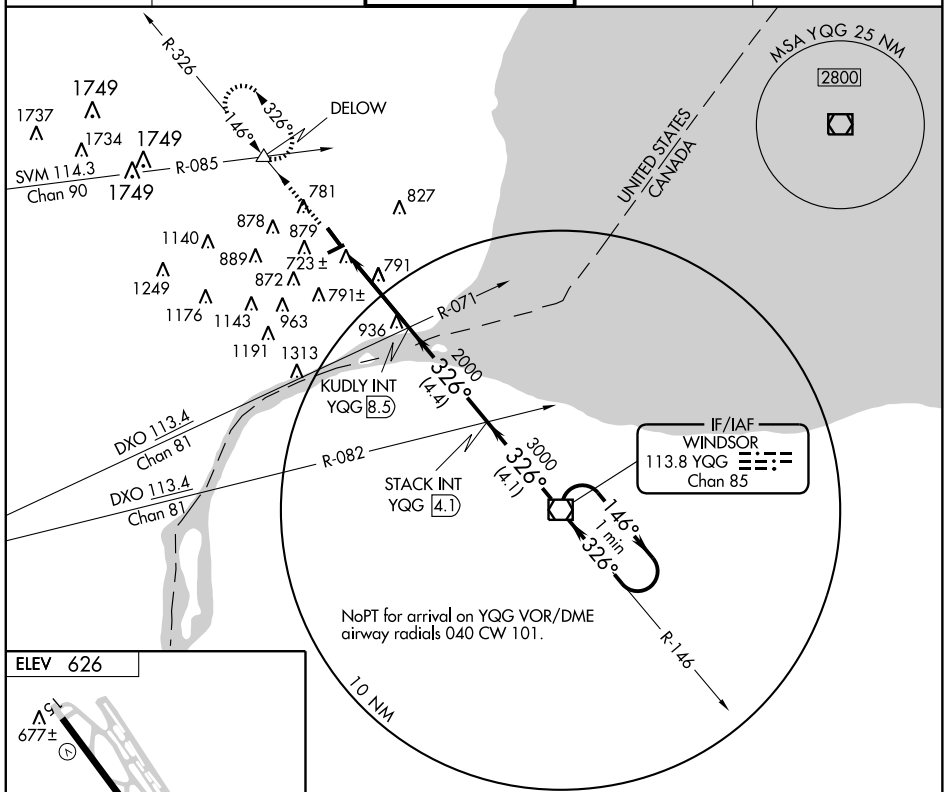
VOR RWY 33

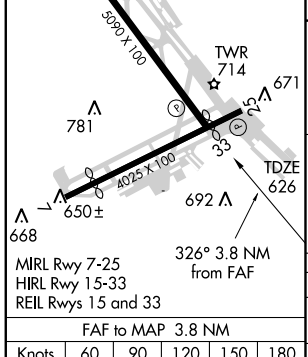
DETROIT/ COLEMAN A. YOUNG MUNI (DET)

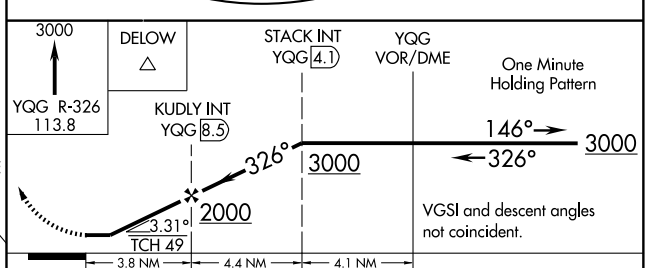
Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metro Wayne County altimeter setting and increase all MDA 60 feet and increase Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 via YQG VOR/DME R-326 to DELOW Int and hold, continue climb-in-hold to 3000.

ATIS	DETROIT APP CON		DETROIT CITY TOWER		GND CON	UNICOM
124.875	126.85	363.2	121.3	257.8	121.85	122.95







FAF to MAP 3.8 NM					
Knots	60	90	120	150	180
Min:Sec	3:48	2:32	1:54	1:31	1:16

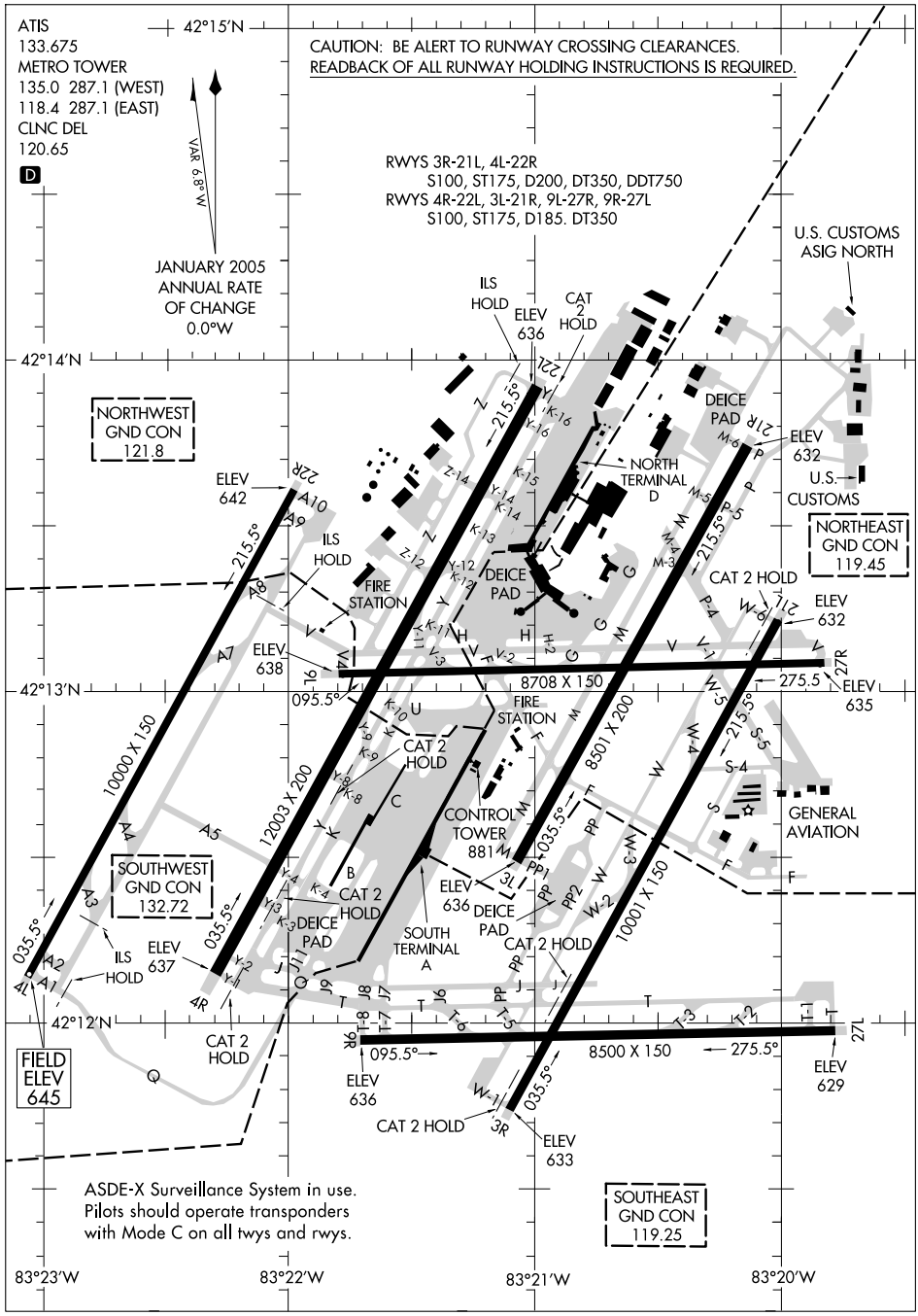
CATEGORY	A	B	C	D
S-33	1240-1 614 (700-1)		1240-1¾ 614 (700-1¾)	1240-2 614 (700-2)
CIRCLING	1240-1 614 (700-1)		1240-1¾ 614 (700-1¾)	1240-2 614 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



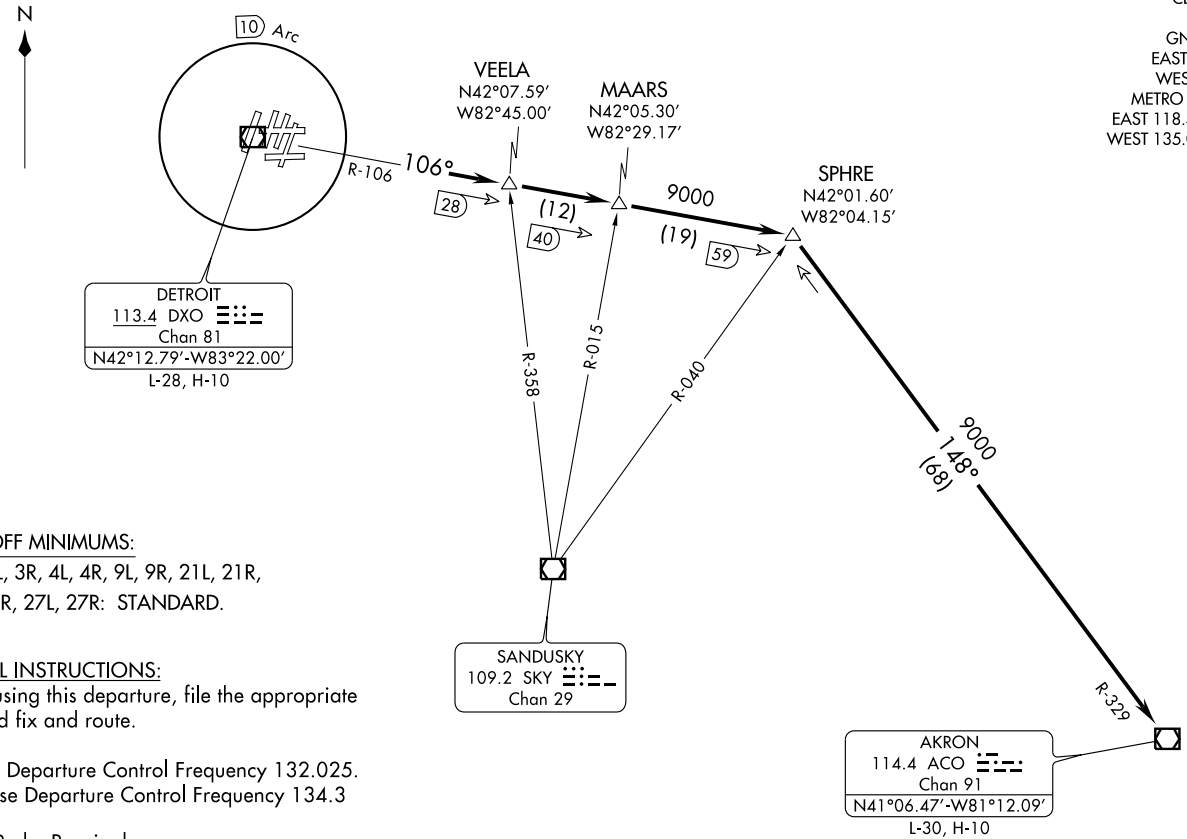
EC-1, 14 JAN 2010 to 11 FEB 2010

(ACO2.ACO) 08101
AKRON TWO DEPARTURE

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

SL-119 (FAA)

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1



TAKE-OFF MINIMUMS:

Rwys 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R, 22L, 22R, 27L, 27R: STANDARD.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted fix and route.

Jets use Departure Control Frequency 132.025.
Props use Departure Control Frequency 134.3

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-106, to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Jets maintain 10,000 feet, cross DXO 10 DME Arc at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.

Rwy 4L: Multiple Trmsn Towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple Antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.

Rwy 4R: Antenna on Bldg 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.

Rwy 9L: Multiple Trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.

Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.

Rwy 21L: Multiple Trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.

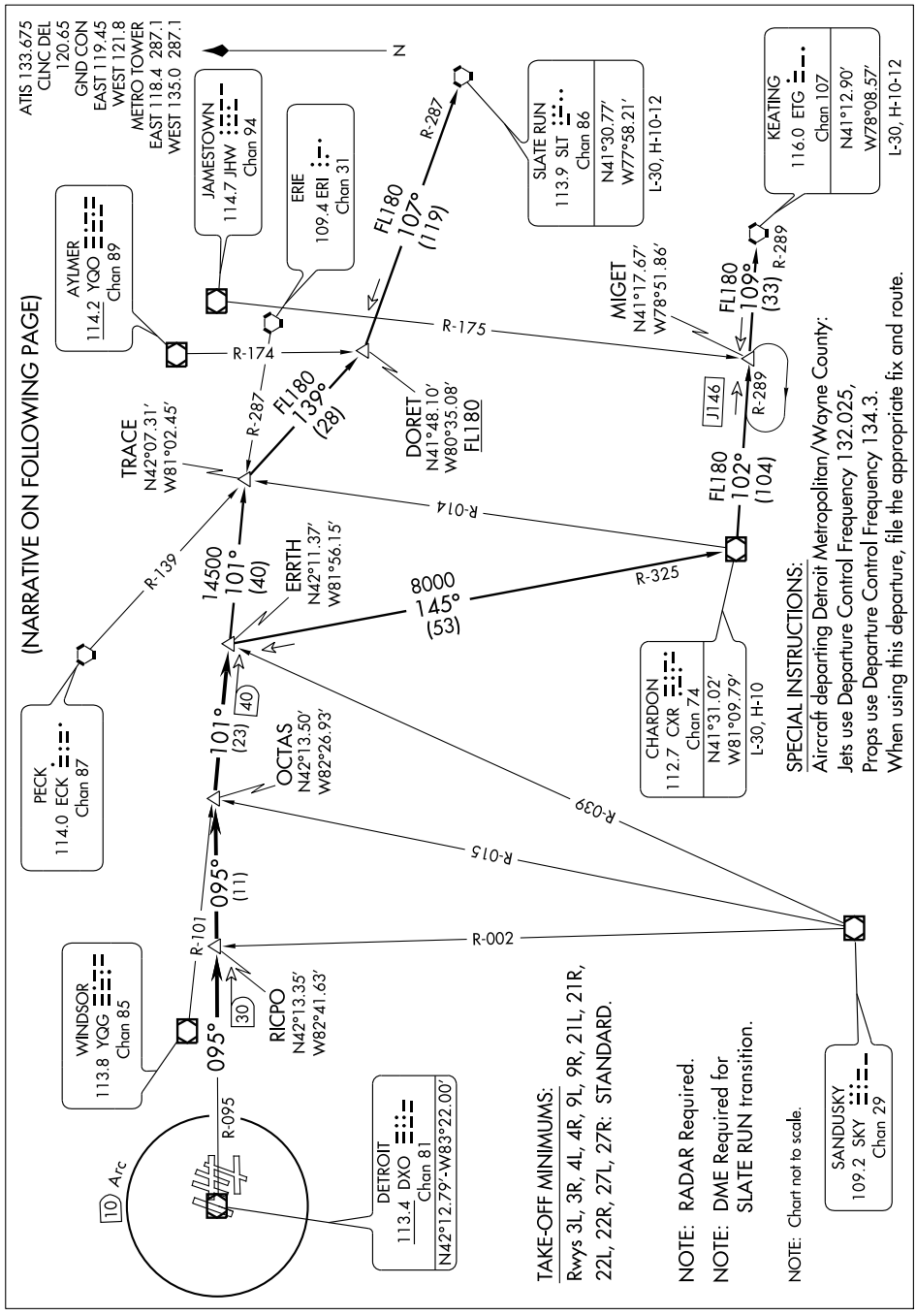
Rwy 22L: Multiple Trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.

Rwy 27R: Rod on ASR 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

ERRTH TWO DEPARTURE

SL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-095 to OCTAS INT then via YQG R-101 to ERRTH, then via (transition). Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.
KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.
SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple transmission towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR, 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

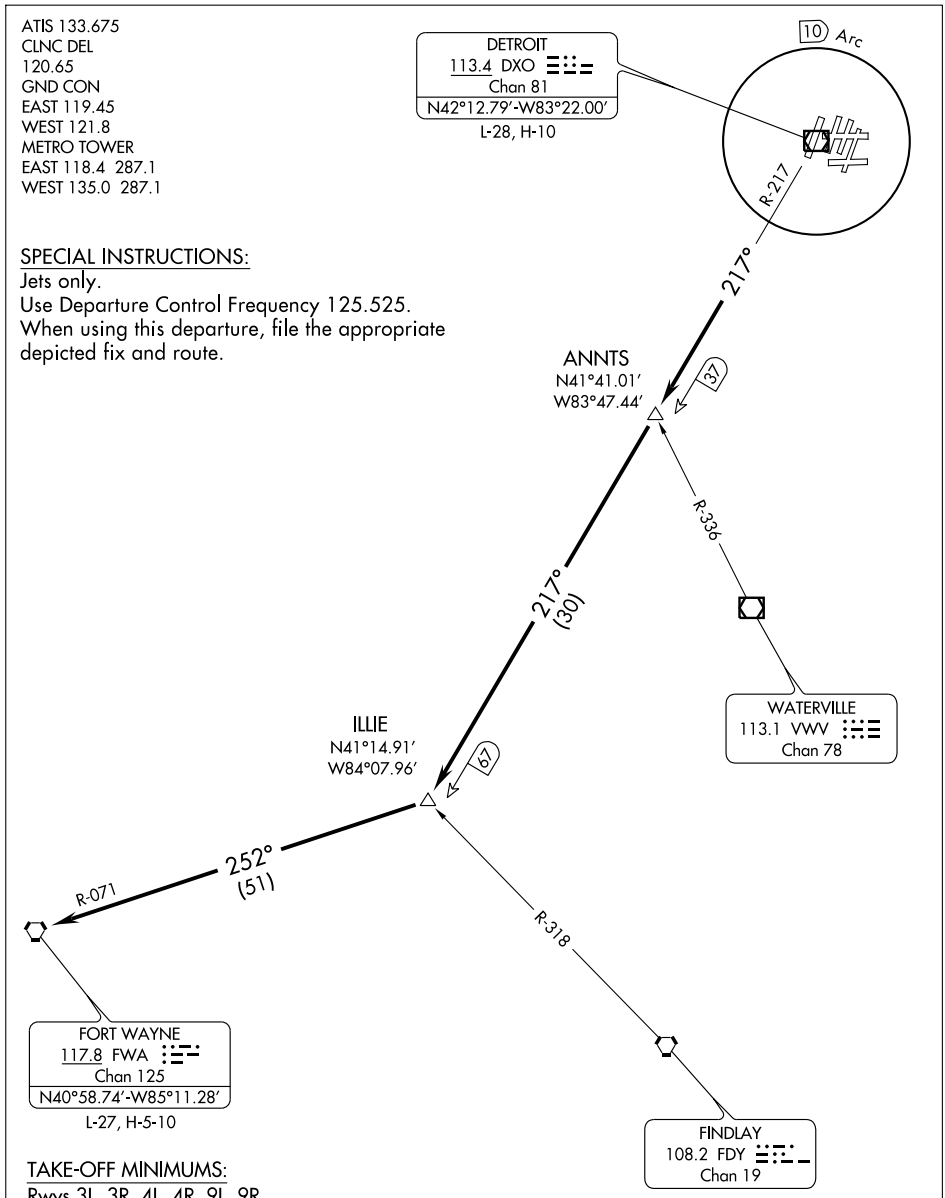
EC-1, 14 JAN 2010 to 11 FEB 2010

(FWA3.FWA) 08101

FORT WAYNE THREE DEPARTURE

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
SL-119 (FAA)
DETROIT, MICHIGAN

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1



SPECIAL INSTRUCTIONS:
Jets only.
Use Departure Control Frequency 125.525.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwys 3L, 3R, 4L, 4R, 9L, 9R,
21L, 21R, 22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

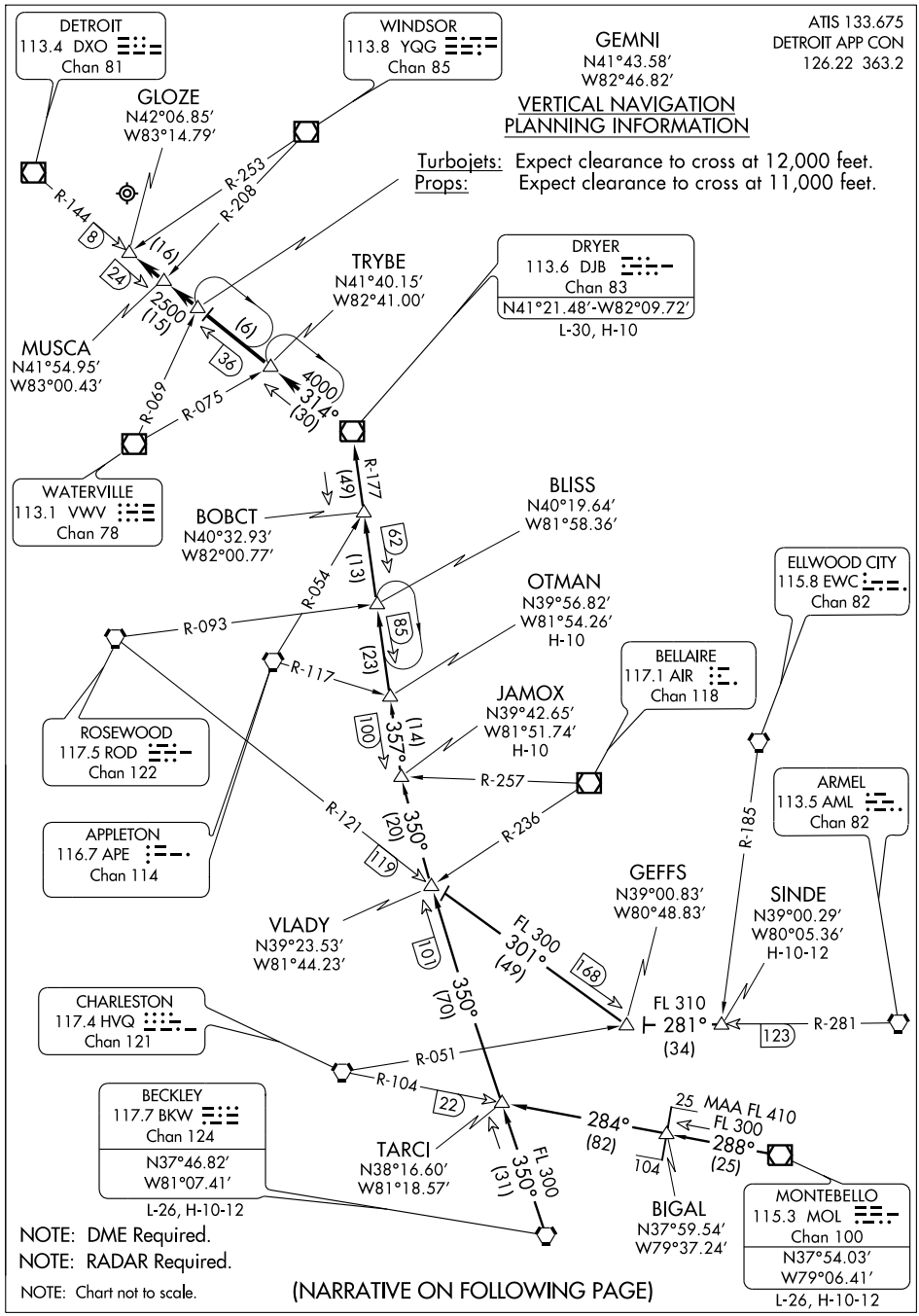
Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple Trmsn towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple trees 794′ to 3694′ from DER, 611′ right of centerline to 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR, 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

GEMNI TWO ARRIVAL

ST-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY
DETROIT, MICHIGAN



NOTE: DME Required.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

ARRIVAL ROUTE DESCRIPTION

BECKLEY TRANSITION (BKW.GEMNI2): From over BKW VORTAC via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .
MONTEBELLO TRANSITION (MOL.GEMNI2): From over MOL VOR/DME via MOL R-288 to BIGAL INT, then via HVQ R-104 to TARCI INT, then via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .
SINDE TRANSITION (SINDE.GEMNI2): From over SINDE INT via AML R-281 to GEFFS INT, then via ROD R-121 to VLADY INT, then via BKW R-350 to JAMOX INT, then via DJB R-177 to DJB VOR/DME. Thence. . . .

. . . . From over DJB VOR/DME via R-314 to GEMNI INT/36 DME, then via DXO VOR/DME R-144, to GLOZE INT/8 DME. Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

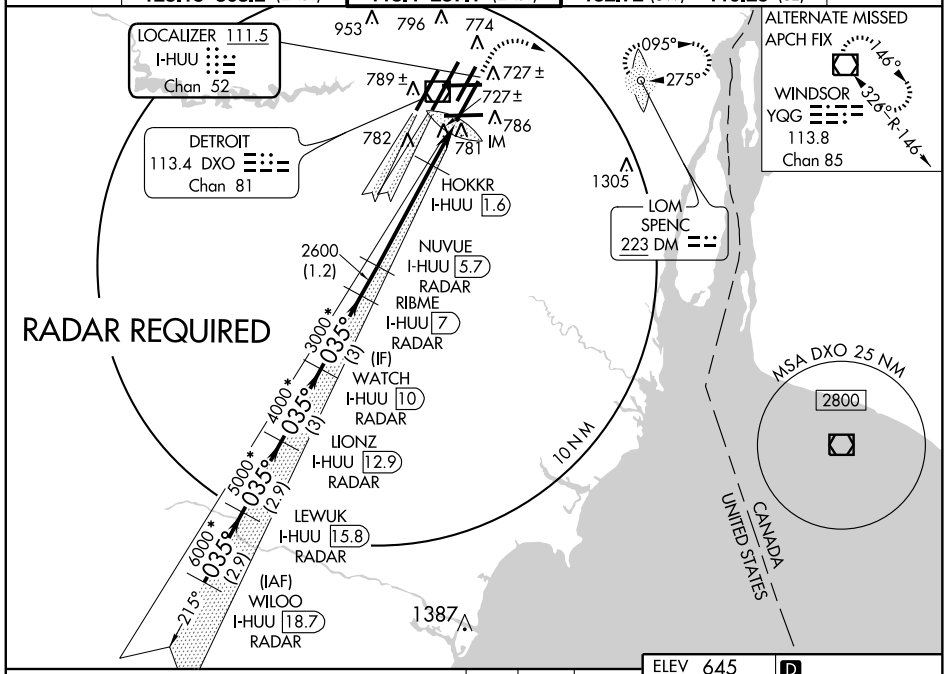
ILS or LOC RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

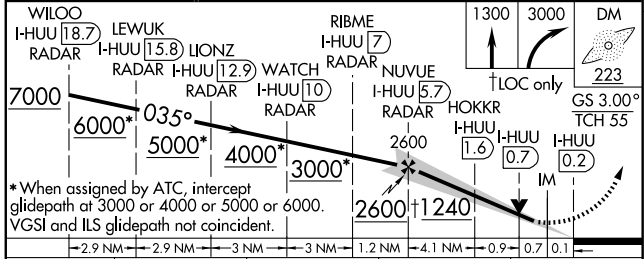
Simultaneous approach authorized with Rwy 4R or Rwy 4L.
LOC procedure NA during simultaneous operations.
ADF and DME or Radar Required.

ALSF-2

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

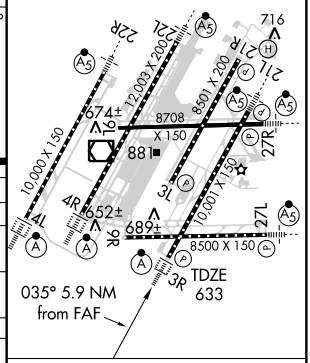




* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000. VGSI and ILS glidepath not coincident.

ELEV 645 D

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 3R	833/18 200 (200-½)			
S-LOC 3R	1240/24 607 (600-½)		1240/60 607 (600-1¼)	1240-1½ 607 (600-1½)
CIRCLING	1240-1 595 (600-1)		1240-1¾ 595 (600-1¾)	1240-2 595 (600-2)
HOKKR FIX MINIMUMS				
S-LOC 3R	980/24 347 (400-½)			980/40 347 (400-¾)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

FAF to MAP 5.9 NM

Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

EC-1. 14 JAN 2010 to 11 FEB 2010

ILS or LOC RWY 4R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy ldg 12003 TDZE 638 Apt Elev 645

Simultaneous approach authorized with ILS Rwy 3R.
ADF and DME or Radar Required.
LOC procedure NA during simultaneous operations.

ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

ALTERNATE MISSED APCH FIX
124° 304°
PONTIAC
111.0 PSI
Chan 47

MISSED APCH FIX
148° 328°
MADDS
338 DE

LOCALIZER 110.7
I-DTW
Chan 44

DETROIT
113.4 DXO
Chan 81

953 796 774 727± 789± IM 782 781 786 1391 1305

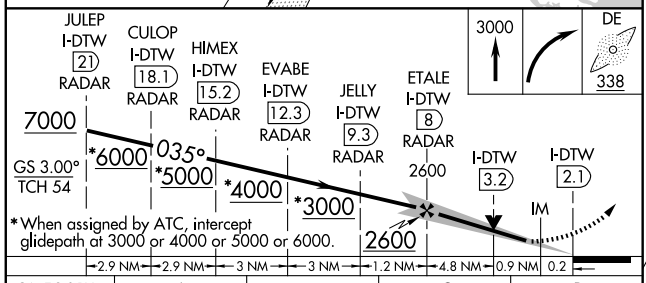
2600 (1.2)
JELLY I-DTW 9.3 RADAR
ETALE I-DTW 8 RADAR
*3000 035° (3)
EVABE I-DTW 12.3 RADAR
(IF) HIMEX I-DTW 15.2 RADAR
*4000 035° (3)
*5000 035° (2.9)
CULOP I-DTW 18.1 RADAR
(IAF) JULEP I-DTW 21 RADAR
*6000 035° (2.9)
215°

MSA DXO 25 NM
2800

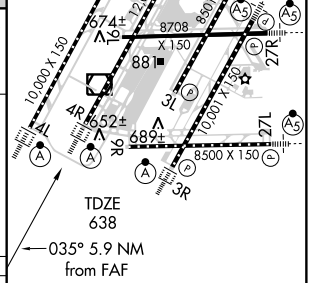
10 NM

UNITED STATES
CANADA

RADAR REQUIRED



ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

CATEGORY	A	B	C	D
S-ILS 4R	838/18 200 (200-½)			
S-LOC 4R	1040/24 402 (400-½)			1040/40 402 (400-¾)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-EJR 111.5 Chan 52	APP CRS 215°	Rwy ldg 10001 TDZE 632 Apt Elev 645

ILS or LOC RWY 21L

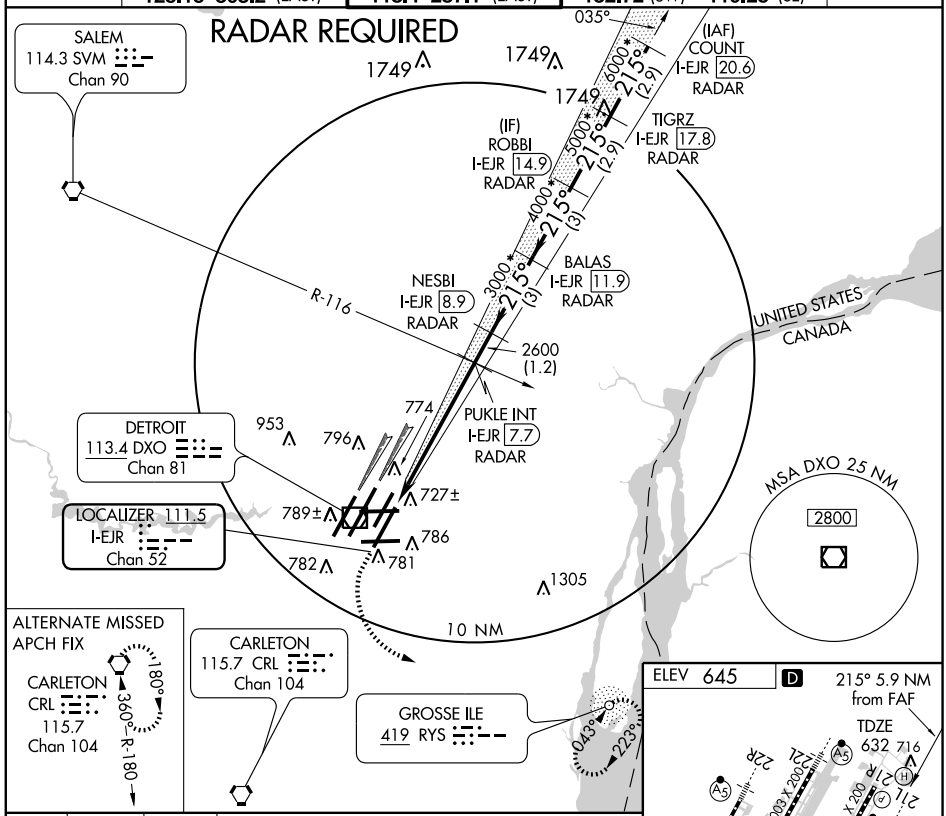
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

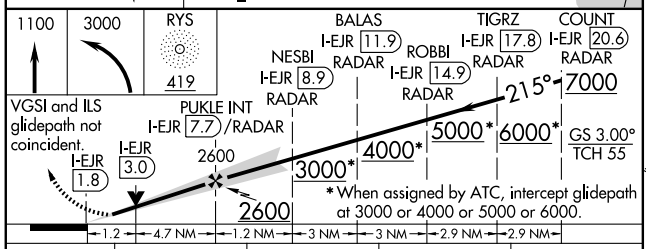
Simultaneous approach authorized with Rwy 22L or Rwy 22R. ADF and DME or RADAR Required. LOC procedure NA during simultanous operations.
** RVR 1800 authorized with the use of FD or AP or HUD to DA.

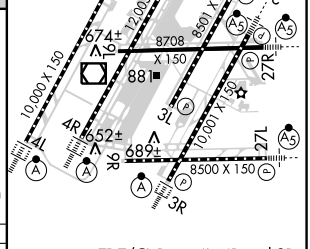
MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct RYS NDB and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 21L	** 832/24 200 (200-½)			
S-LOC 21L	1100/24 468 (500-½)		1100/40 468 (500-¾)	1100/50 468 (500-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

EC-1, 14 JAN 2010 to 11 FEB 2010

LOC/DME I-DWC 110.7 Chan 44	APP CRS 215°	Rwy ldg 12003 TDZE 637 Apt Elev 645

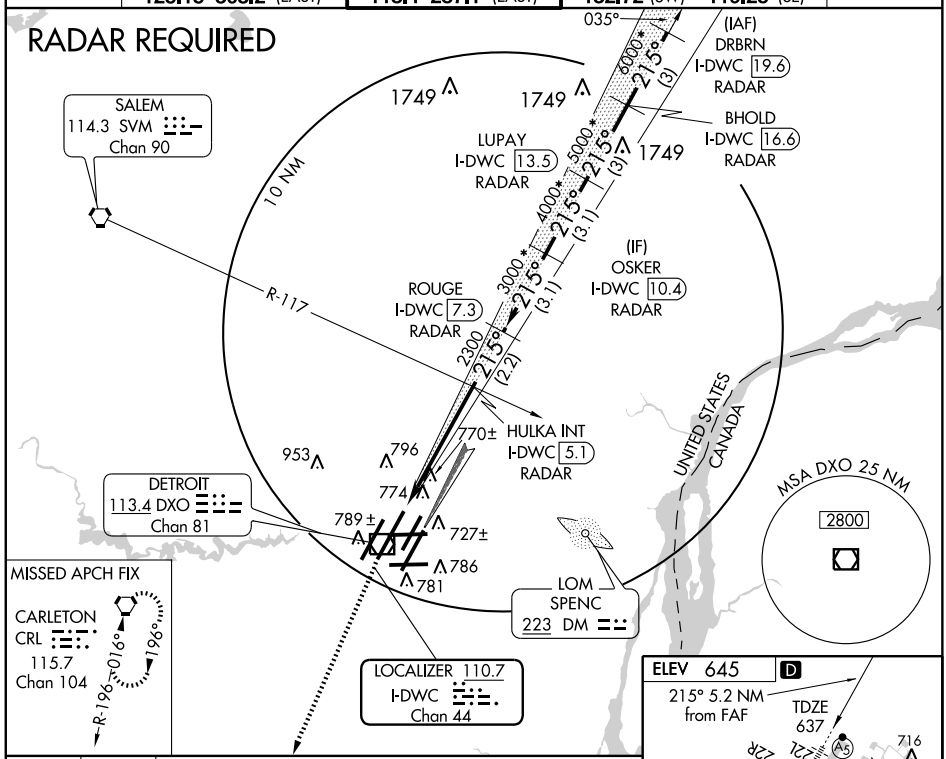
ILS or LOC RWY 22L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

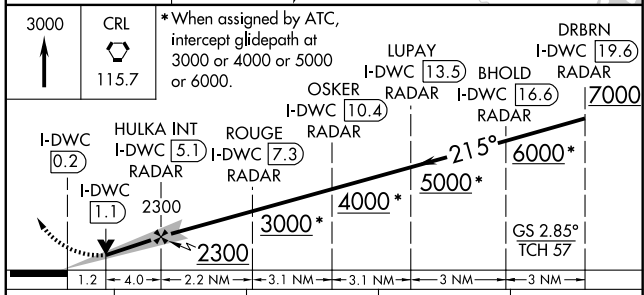
T Simultaneous approach authorized with Rwy 21L. DME or RADAR Required. LOC procedure NA during simultanous operations.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

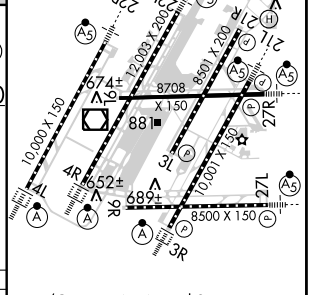
MALSR

MISSED APPROACH: Climb to 3000 direct CRL VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L , 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 22L	**837/24 200 (200-½)			
S-LOC 22L	1080/24 443 (500-½)		1080/40 443 (500-¾)	1080/50 443 (500-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

FAF to MAP 5.2 NM

Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-EPA	APP CRS	Rwy ldg	8500
110.15	275°	TDZE	631
		Apt Elev	646

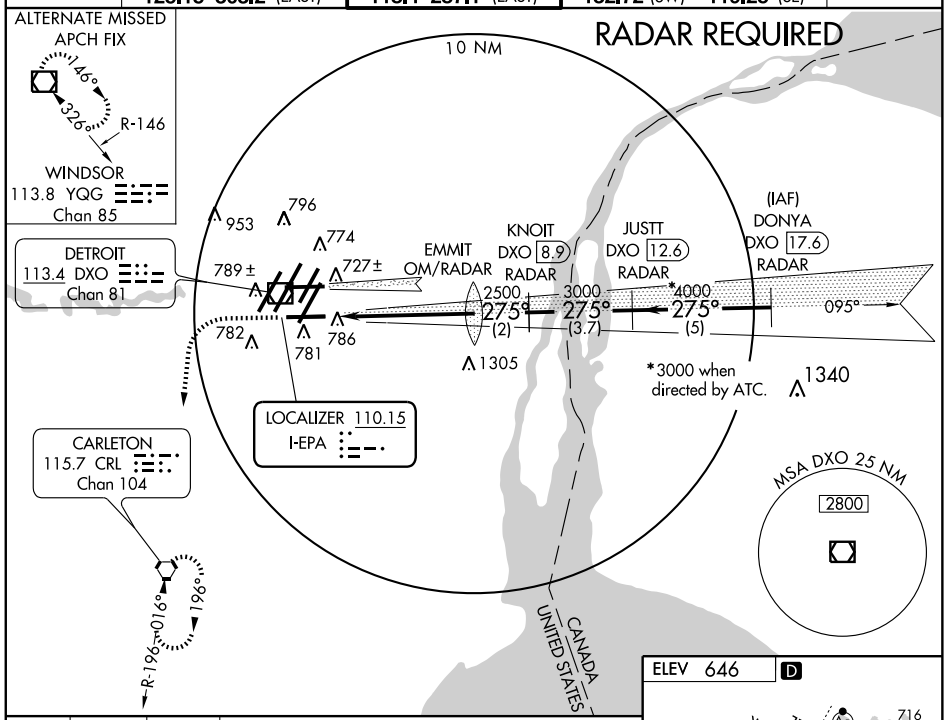
ILS or LOC RWY 27L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

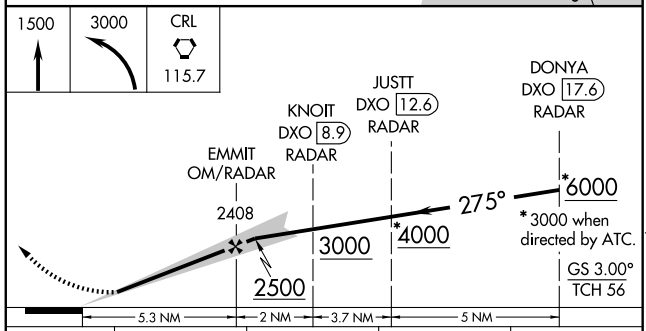
DME from DXO VOR/DME.
Simultaneous approach authorized with Rwy 27R.
RVR 1800 authorized with the use of FD or AP or HUD to DA.

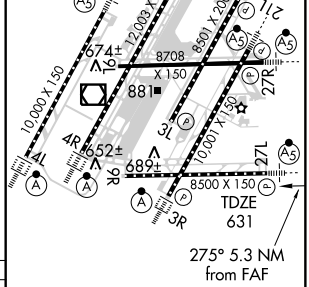
MALSR

MISSED APPROACH: Climb to 1500 then climbing left turn to 3000 direct CRL VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

CATEGORY	A	B	C	D
S-ILS 27L	# 831/24 200 (200-½)			
S-LOC 27L	1060/24 429 (500-½)		1060/40 429 (500-¾)	1060/50 429 (500-1)
CIRCLING	1200-1 554 (600-1)		1200-1½ 554 (600-1½)	1200-2 554 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-DMI	APP CRS	Rwy ldg	8708
108.5	275°	TDZE	635
		Apt Elev	646

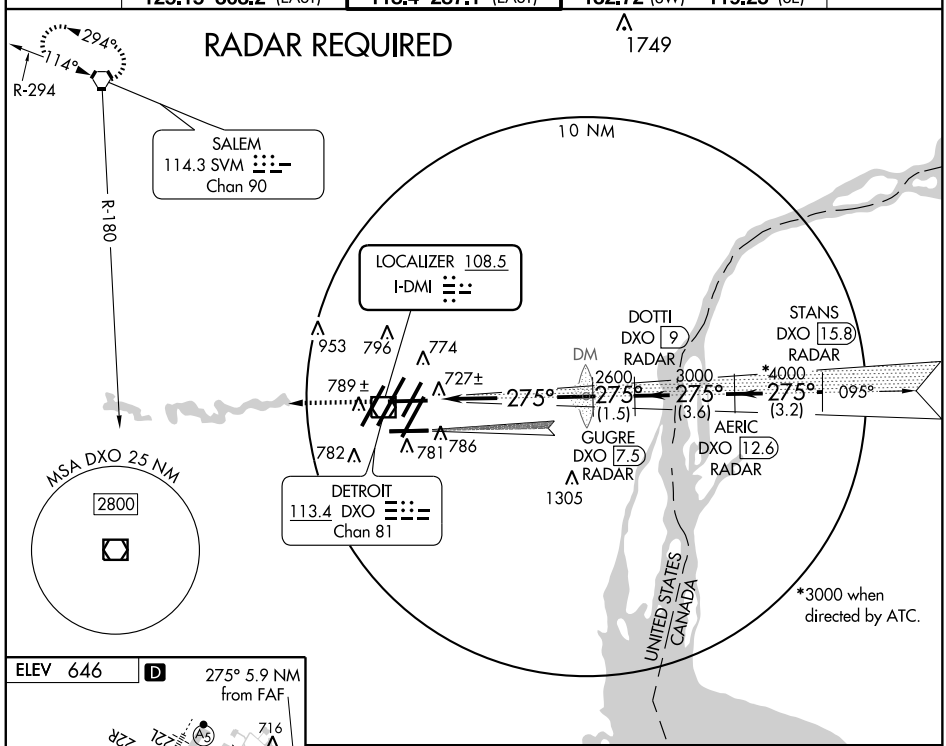
ILS or LOC RWY 27R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

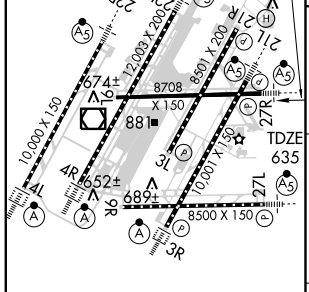
DME from DXO VOR/DME. DME or Radar required.
Simultaneous approach authorized with Rwy 27L.
RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 3000 via heading 275° and SVM R-180 to SVM VORTAC and hold.

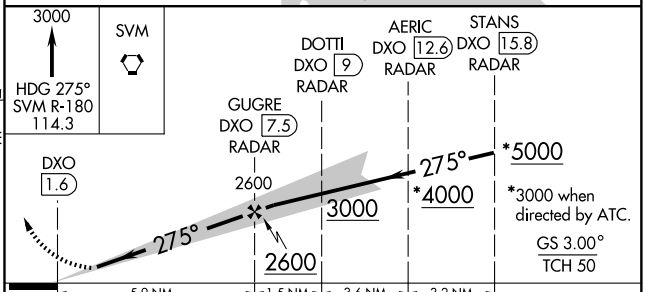
ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58



CATEGORY	A	B	C	D
S-ILS 27R	# 835/24 200 (200-½)			
S-LOC 27R	1060/24 425 (500-½)		1060/40 425 (500-¾)	
CIRCLING	1200-1 554 (600-1)		1200-1½ 554 (600-1½)	1200-2 554 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 3R (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

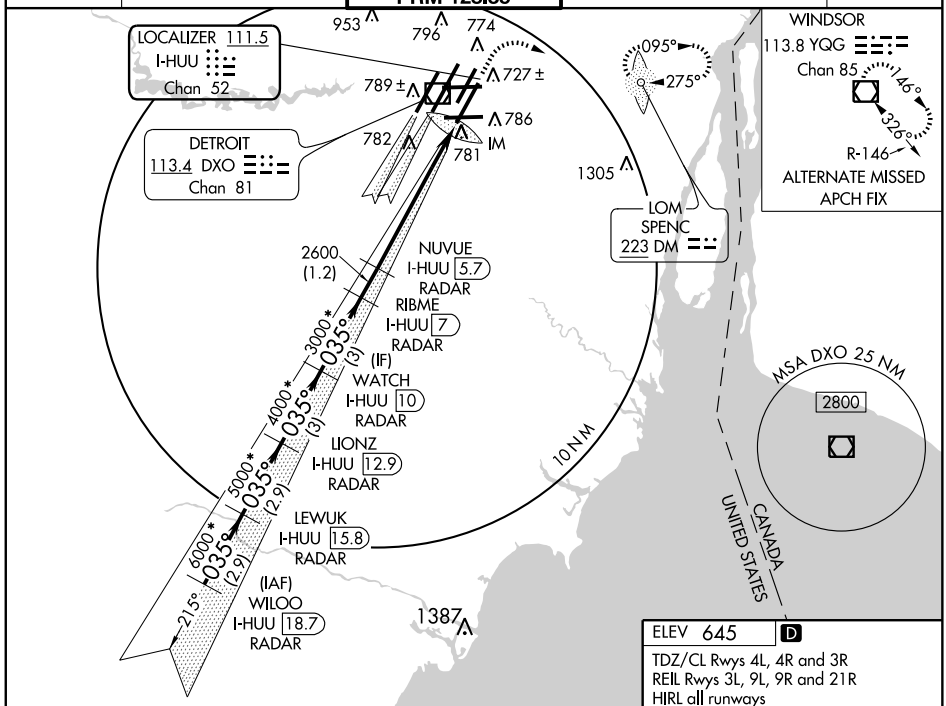
LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

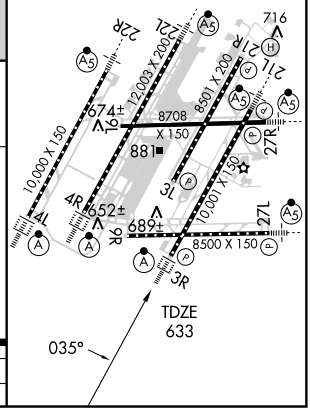
ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

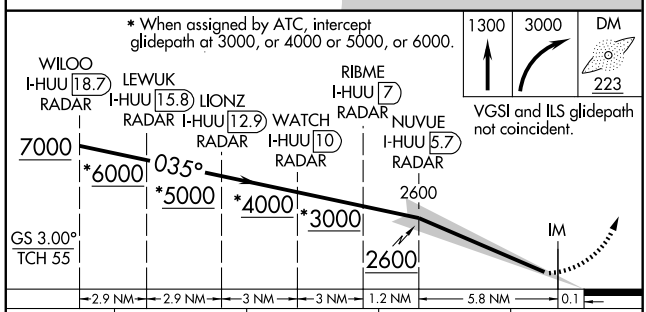


RADAR REQUIRED

ELEV 645 D

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways





CATEGORY	A	B	C	D
S-ILS 3R	833/18 200 (200-½)			

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 3R (CAT II)
(SIMULATNEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

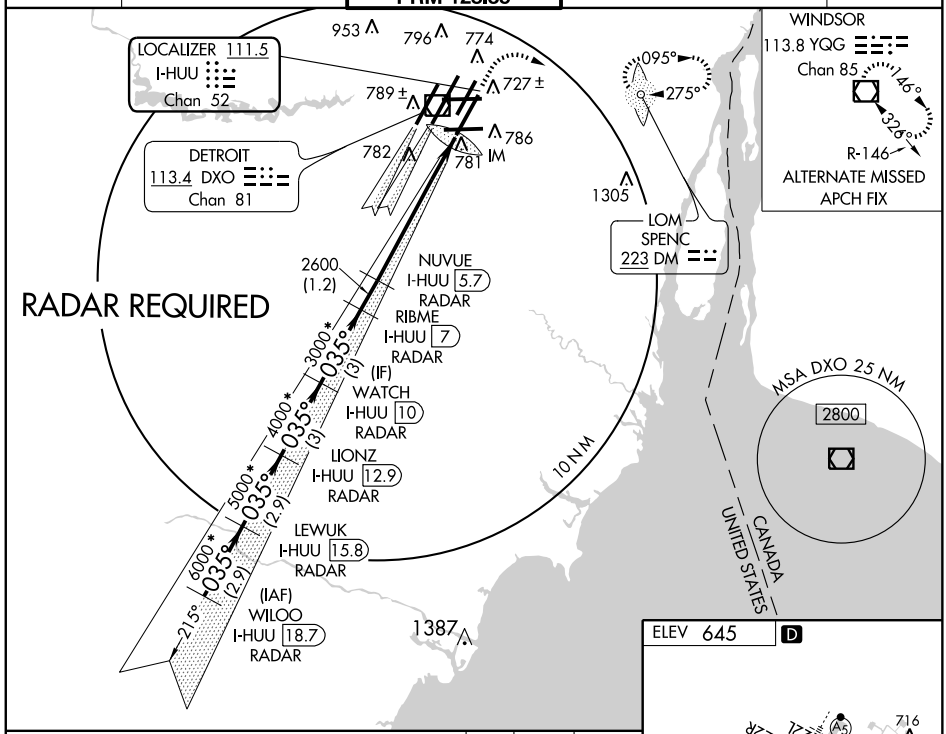
LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

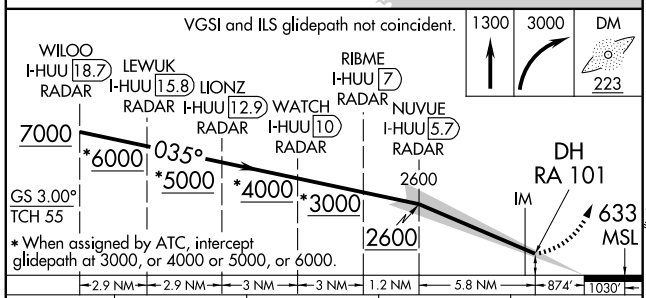
Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

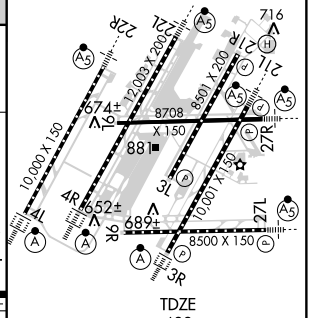




CATEGORY	A	B	C	D
S-ILS PRM 3R	733/12 100 RA 101			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 3R (CAT III)
(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

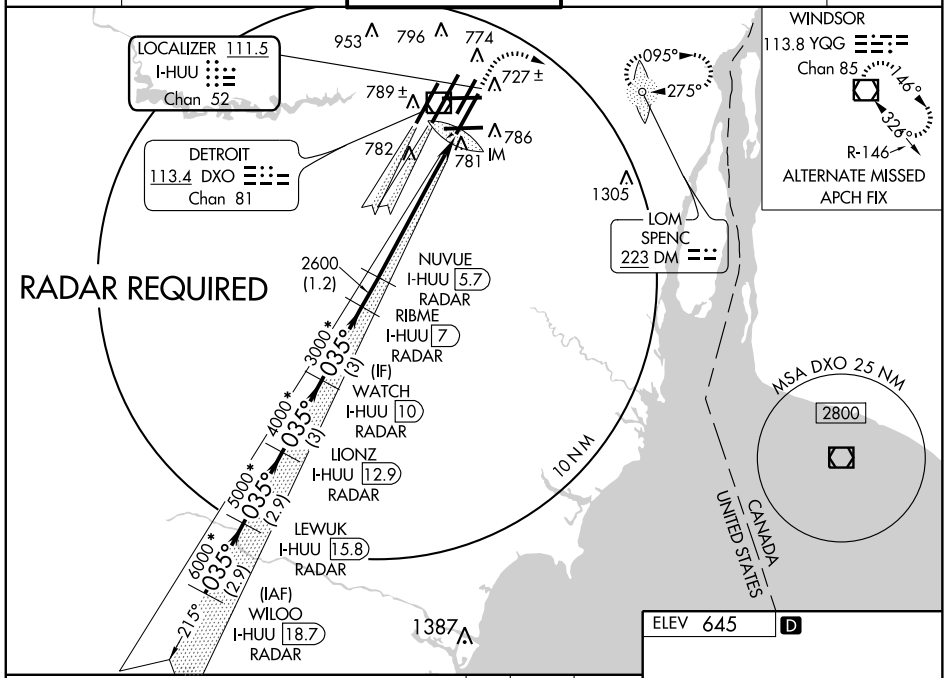
LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 4L. Procedure NA when glideslope not available. Dual VHF comm required. See additional requirements on AAUP. ADF and DME or Radar required.

ALSF-2

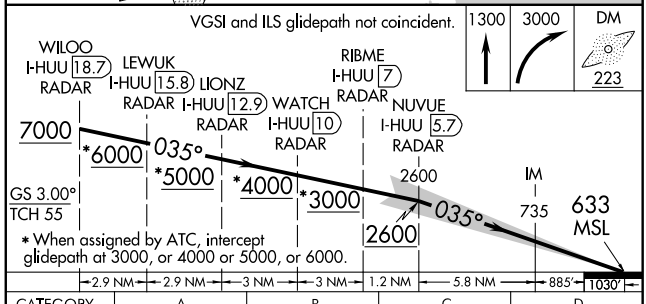
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



ELEV 645 D

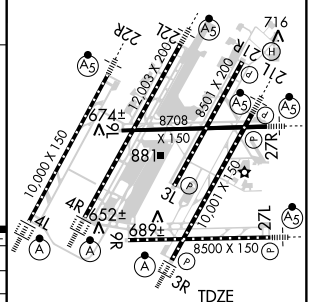
VGSI and ILS glidepath not coincident.



* When assigned by ATC, intercept glidepath at 3000, or 4000 or 5000, or 6000.

CATEGORY	A	B	C	D
S-ILS PRM 3R		CAT IIIA	RVR 07	
S-ILS PRM 3R		CAT IIIB	RVR 06	
S-ILS PRM 3R		CAT IIIC	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

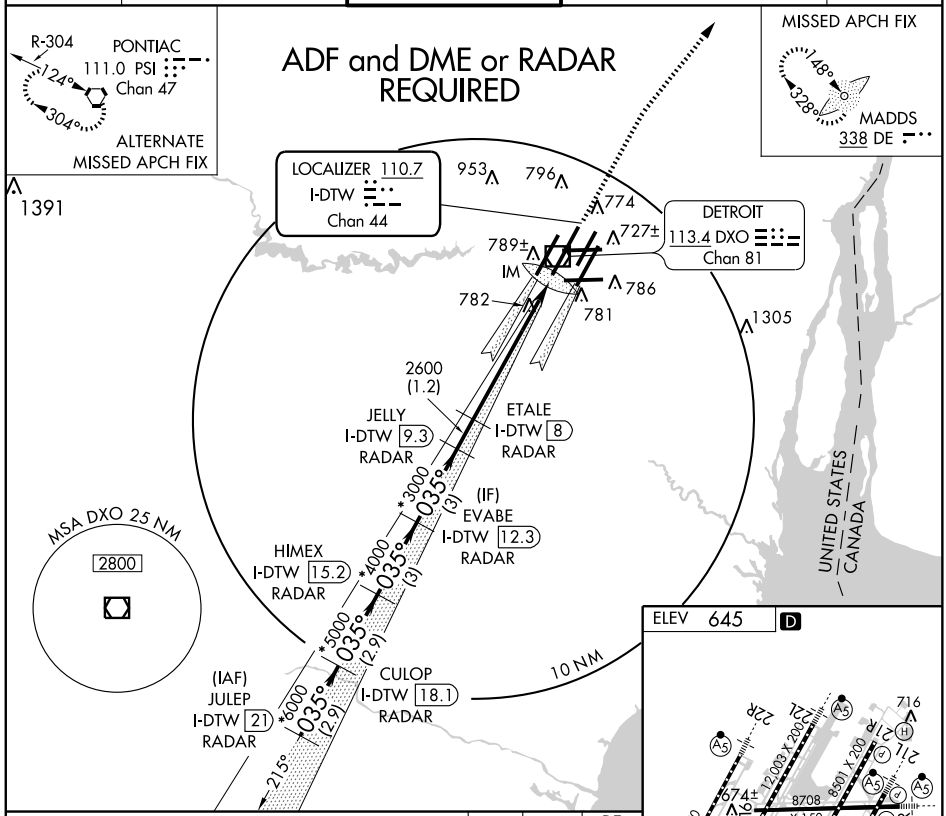
LOC/DME I-DTW	APP CRS	Rwy ldg	12003
110.7	035°	TDZE	638
Chan 44		Apt Elev	645

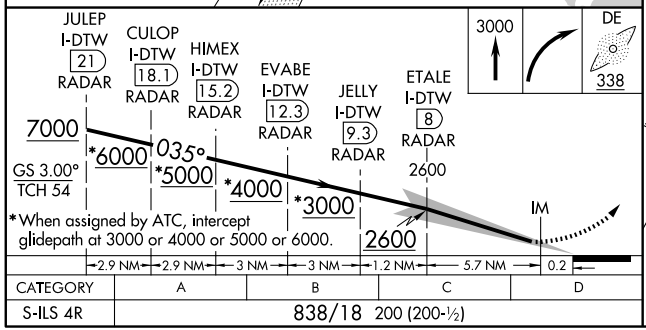
Simultaneous close parallel approach authorized with ILS PRM Rwy 4L and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III). Procedure not authorized when glideslope not available. Dual VHF Comm required. See additional requirements on AAUP.

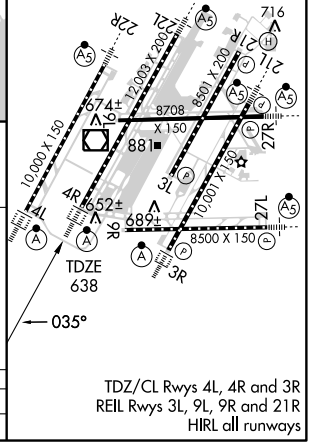
ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







CATEGORY	A	B	C	D
S-ILS 4R	838/18 200 (200-½)			

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R (CAT II) (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

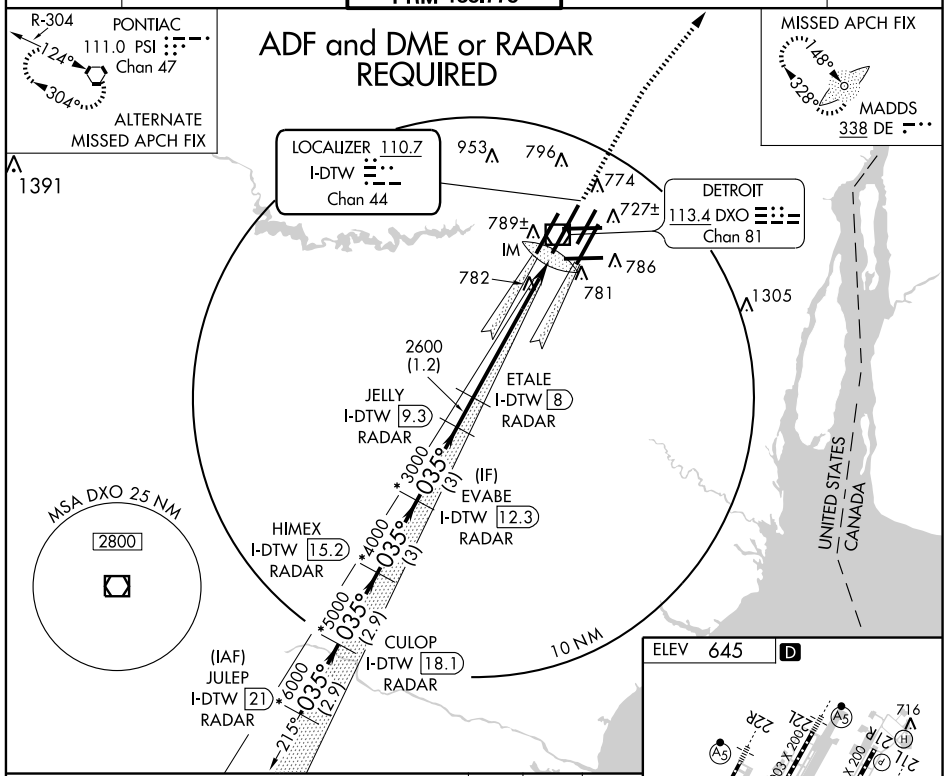
LOC/DME I-DTW	APP CRS	Rwy ldg	12003
110.7	035°	TDZE	638
Chan 44		Apt Elev	645

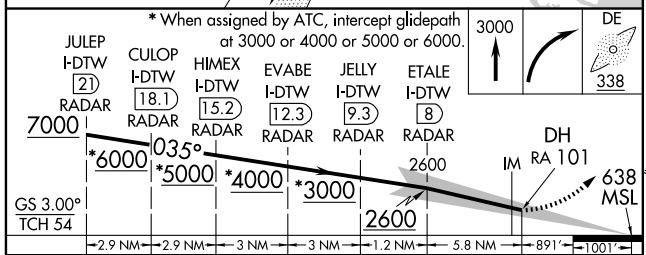
Simultaneous close parallel approach authorized with ILS PRM Rwy 4L and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III). Procedure not authorized when glideslope not available. Dual VHF Comm required. See additional requirements on AAUP.

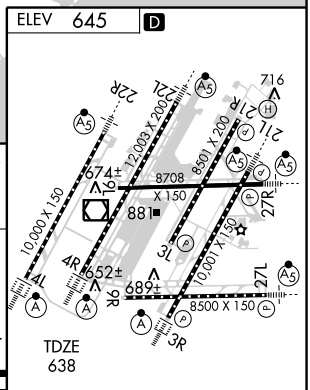
ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







CATEGORY	A	B	C	D
S-ILS 4R	738/12 100 RA 101			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R (CAT III)
(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DTW	APP CRS	Rwy ldg	12003
110.7	035°	TDZE	638
Chan 44		Apt Elev	645

T Simultaneous close parallel approach authorized with ILS PRM Rwy 4L and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III). Procedure not authorized when glideslope not available. Dual VHF Comm required. See additional requirements on AAUP.

ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

ADF and DME or RADAR REQUIRED

LOCALIZER 110.7 I-DTW Chan 44

MISSED APCH FIX 148° 328° MADDS 338 DE

DETROIT 113.4 DXO Chan 81

R-304 PONTIAC 111.0 PSI Chan 47 124° 304°

ALTERNATE MISSED APCH FIX

1391 953 796 774 727± 789± IM 786 782 781 1305

2600 (1.2) ETALE I-DTW 8 RADAR

JELLY I-DTW 9.3 RADAR

*3000 035° (3) (IF) EVABE I-DTW 12.3 RADAR

HIMEX I-DTW 15.2 RADAR

*4000 035° (3)

*5000 035° (2.9) CULOP I-DTW 18.1 RADAR

(IAF) JULEP I-DTW 21 RADAR

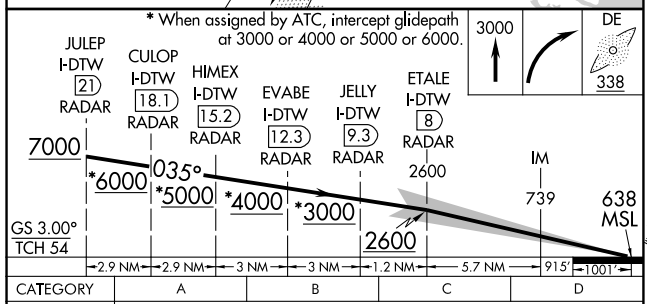
*6000 035° (2.9) 215°

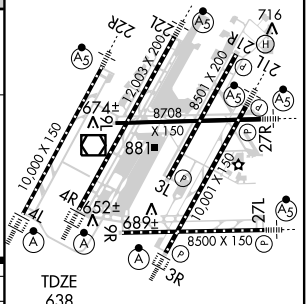
MSA DXO 25 NM 2800

10 NM

UNITED STATES CANADA

ELEV 645 D





CATEGORY	A	B	C	D
S-ILS 4R	CAT IIIA	RVR 700		
S-ILS 4R	CAT IIIB	RVR 600		
S-ILS 4R	CAT IIIC	NA		

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 21L
(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

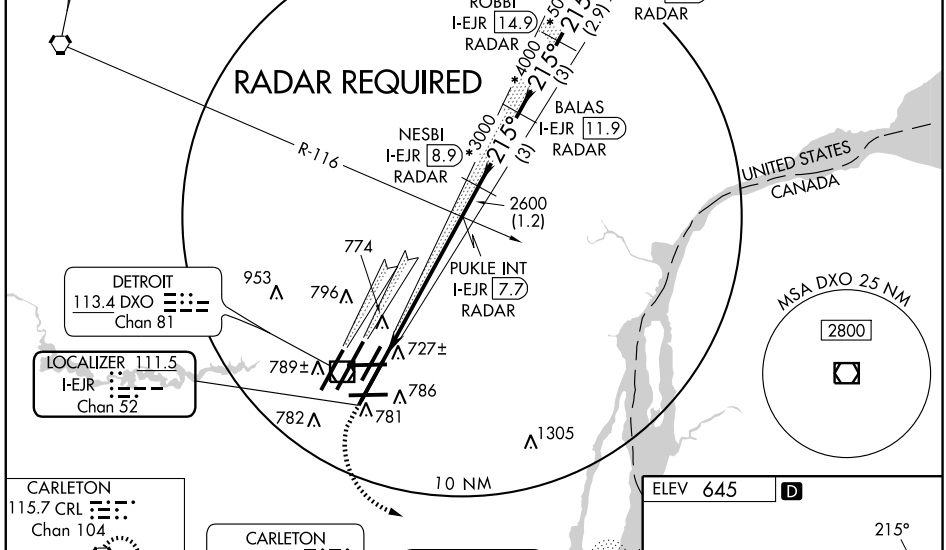
LOC/DME I-EJR	APP CRS	Rwy ldg	10001
111.5	215°	TDZE	632
Chan 52		Apt Elev	645

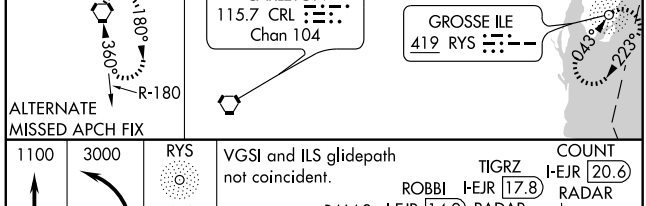
Simultaneous close parallel approach authorized with ILS PRM Rwy 22L and ILS PRM Rwy 22R. Procedure NA when glideslope not available. ADF and RADAR or DME Required. Dual VHF Comm Required. See additional requirements on AAUP.
** RVR 1800 authorized with the use of FD or HUD to DA.

MALSR

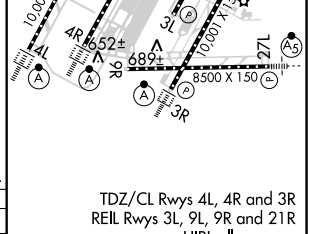
MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct RYS NDB and hold.

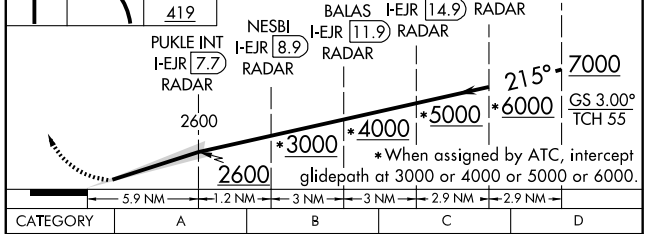
ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 128.35	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





ELEV 645 D





CATEGORY	A	B	C	D
S-ILS 21L	**832/24 200 (200-½)			

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 14 JAN 2010 to 11 FEB 2010

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 21L approach. If later advised to expect an ILS 21L approach, the ILS/PRM 21L chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 21L approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

ILS PRM RWY 22L (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

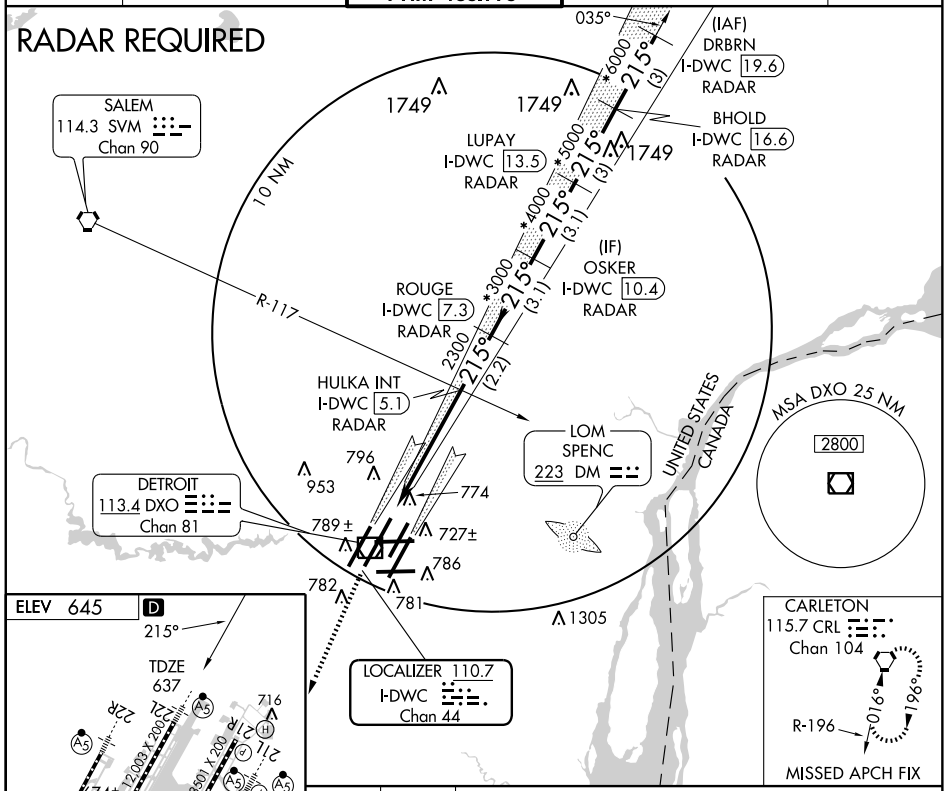
LOC/DME I-DWC 110.7 Chan 44	APP CRS 215°	Rwy ldg 12003 TDZE 637 Apt Elev 645

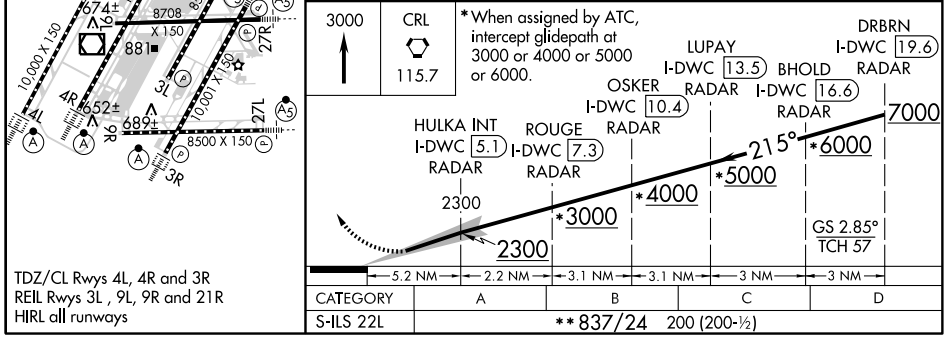
RADAR or DME Required. Simultaneous close parallel approach authorized with ILS PRM Rwy 21L and ILS PRM Rwy 22R. Procedure NA when glideslope not available. Dual VHF Comm Required. See additional requirements on AAUP.
** RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 3000 direct CRL VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 135.775	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L , 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 22L	**837/24 200 (200-½)			

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 22L approach. If later advised to expect an ILS 22L approach, the ILS/PRM 22L chart may be used after completing the following briefing items:

   (a) Minimums and missed approach procedures are unchanged.
   (b) Monitor frequency no longer required.
   (c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 22L approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

   (a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.

   (b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

   "TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

ILS RWY 3R (CAT II)

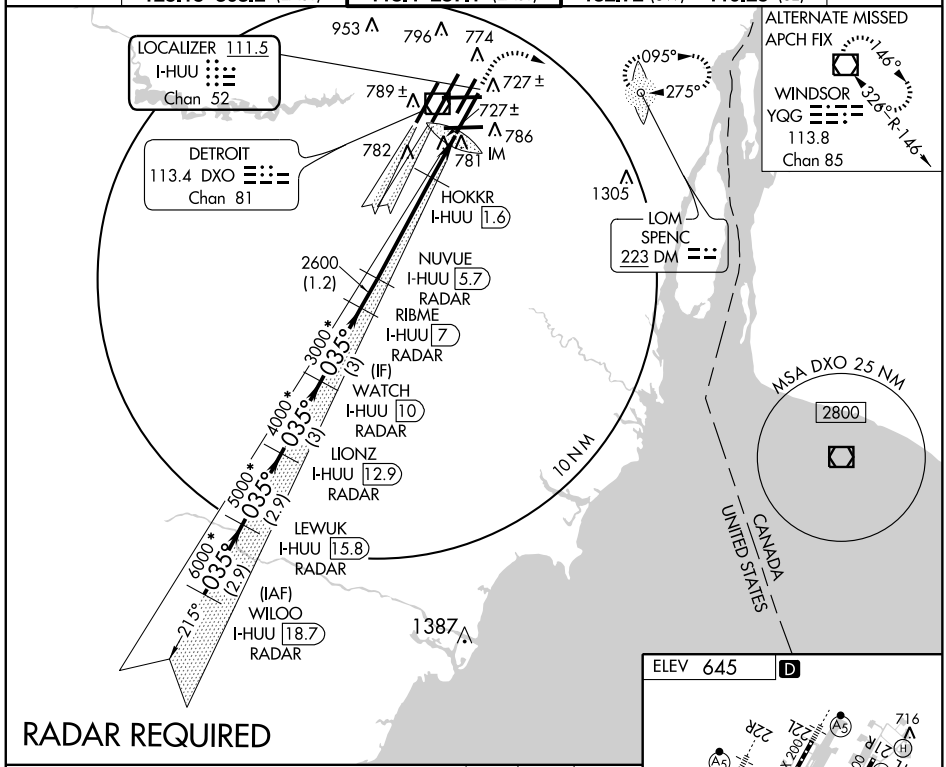
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with Rwy 4R or Rwy 4L. ADF and DME or Radar Required.

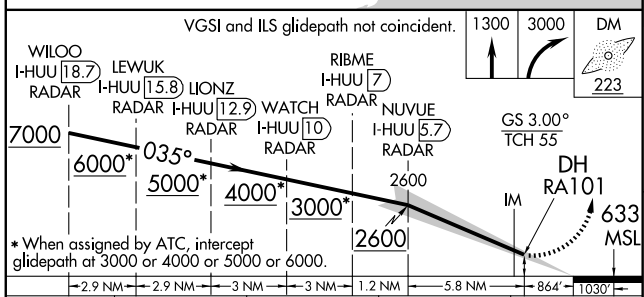
ALSF-2

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

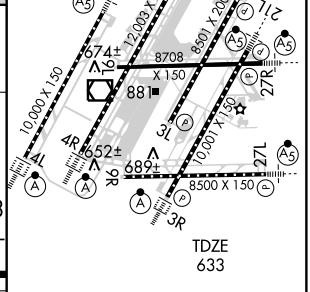


RADAR REQUIRED



CATEGORY	A	B	C	D
S-ILS 3R	733/12 100 RA 101			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	035°	TDZE	633
Chan 52		Apt Elev	645

ILS RWY 3R (CAT III)

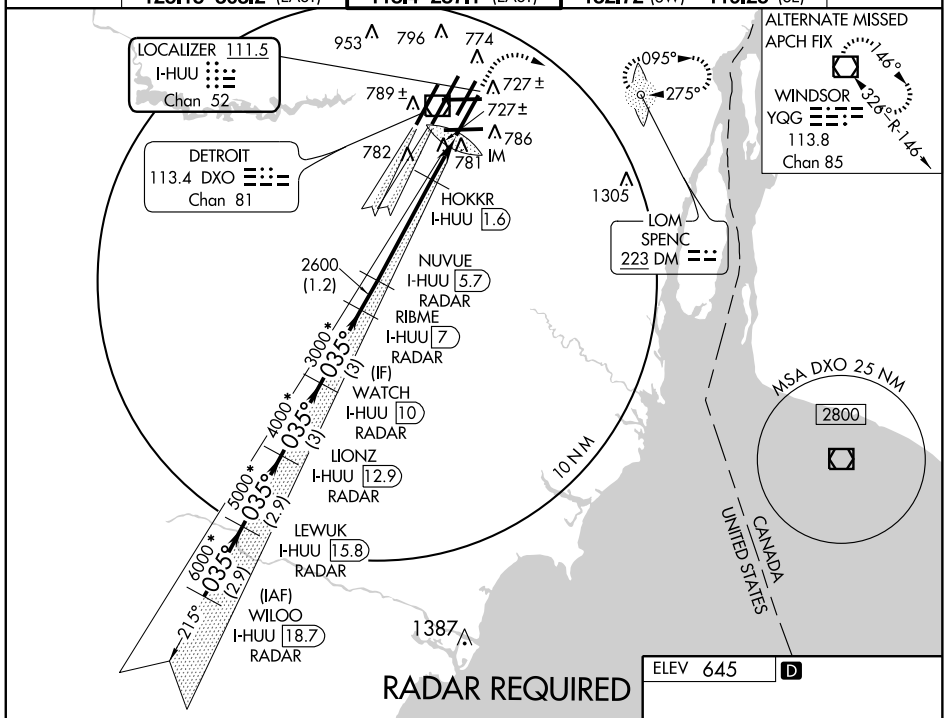
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with Rwy 4R or Rwy 4L. ADF and DME or Radar Required.

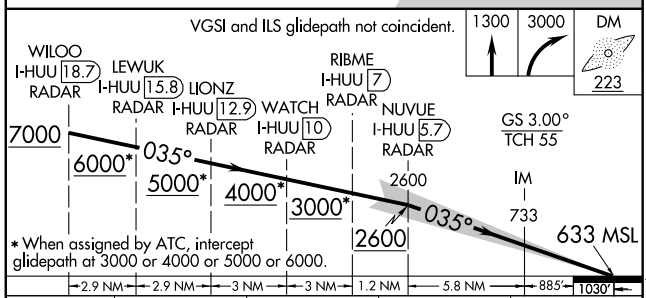
ALSF-2

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SPENC LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



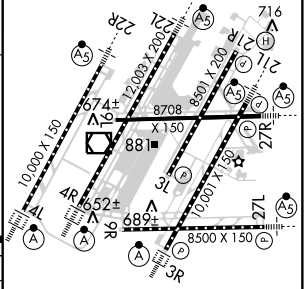
RADAR REQUIRED



CATEGORY	A	B	C	D
S-ILS 3R		CAT IIIA	RVR 07	
S-ILS 3R		CAT IIIB	RVR 06	
S-ILS 3R		CAT IIIC	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-DTW	APP CRS	Rwy ldg 12003
110.7	035°	TDZE 638
Chan 44		Apt Elev 645

ILS RWY 4R (CAT II)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with ILS Rwy 3R. ADF and DME or Radar Required.

ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

ALTERNATE MISSED APCH FIX
124° 304°
PONTIAC
111.0 PSI
Chan 47

MISSED APCH FIX
148° 328°
MADDS
338 DE

LOCALIZER 110.7
I-DTW
Chan 44

DETROIT
113.4 DXO
Chan 81

953 796 774 727± 789± IM 782 781 786 1391 1305

2600 (1.2)

JELLY I-DTW 9.3 RADAR

ETALE I-DTW 8 RADAR

*3000 035° (3)

EVABE I-DTW 12.3 RADAR

(IF) HIMEX I-DTW 15.2 RADAR

*4000 035° (3)

*5000 035° (2.9)

(IAF) JULEP I-DTW 21 RADAR

CULOP I-DTW 18.1 RADAR

*6000 035° (2.9)

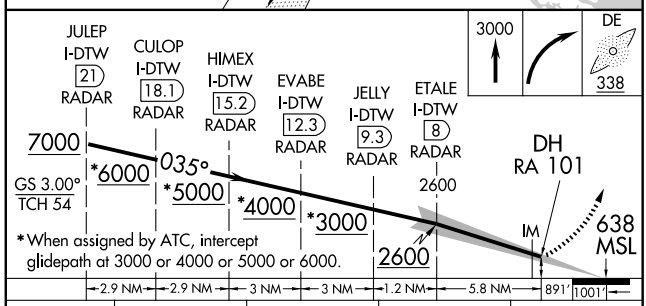
215°

MSA DXO 25 NM
2800

10 NM

UNITED STATES
CANADA

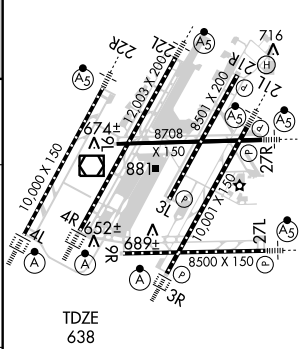
RADAR REQUIRED



CATEGORY	A	B	C	D
S-ILS 4R	738/12 100 RA101			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-DTW 110.7 Chan 44	APP CRS 035°	Rwy ldg 12003 TDZE 638 Apt Elev 645

ILS RWY 4R (CAT III)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

Simultaneous approach authorized with ILS Rwy 3R. ADF and DME or Radar Required.

ALSF-2

MISSED APPROACH: Climb to 3000 then right turn direct MADDS LOM and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

ALTERNATE MISSED APCH FIX
124° 304°
PONTIAC
111.0 PSI
Chan 47

MISSED APCH FIX
148° 328°
MADDS
338 DE

LOCALIZER 110.7
I-DTW
Chan 44

DETROIT
113.4 DXO
Chan 81

953 796 774 727± 789± IM 782 781 786 1391 1305

2600 (1.2)

JELLY I-DTW 9.3 RADAR

ETALE I-DTW 8 RADAR

*3000 035° (3)

EVABE I-DTW 12.3 RADAR

(IF) HIMEX I-DTW 15.2 RADAR

*4000 035° (3)

*5000 035° (2.9)

(IAF) JULEP I-DTW 21 RADAR

*6000 035° (2.9)

CULOP I-DTW 18.1 RADAR

215°

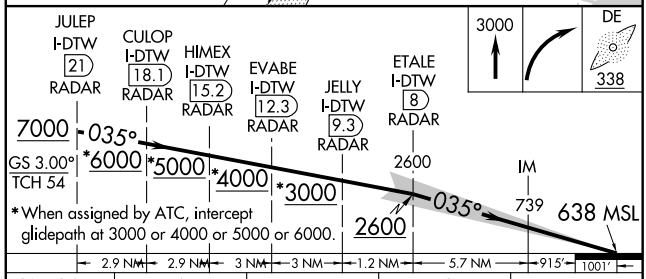
10 NM

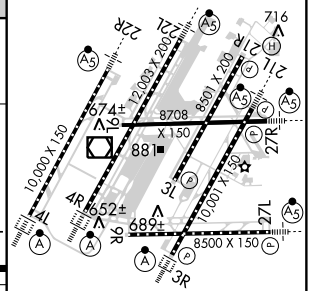
UNITED STATES
CANADA

MSA DXO 25 NM
2800

RADAR REQUIRED

ELEV 645 D





TDZE 638

CATEGORY	A	B	C	D
S-ILS 4R	CAT IIIA	RVR 07		
S-ILS 4R	CAT IIIB	RVR 06		
S-ILS 4R	CAT IIIC	NA		

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

DETROIT, MICHIGAN

AL-119 (FAA)

ILS Y PRM RWY 4L (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

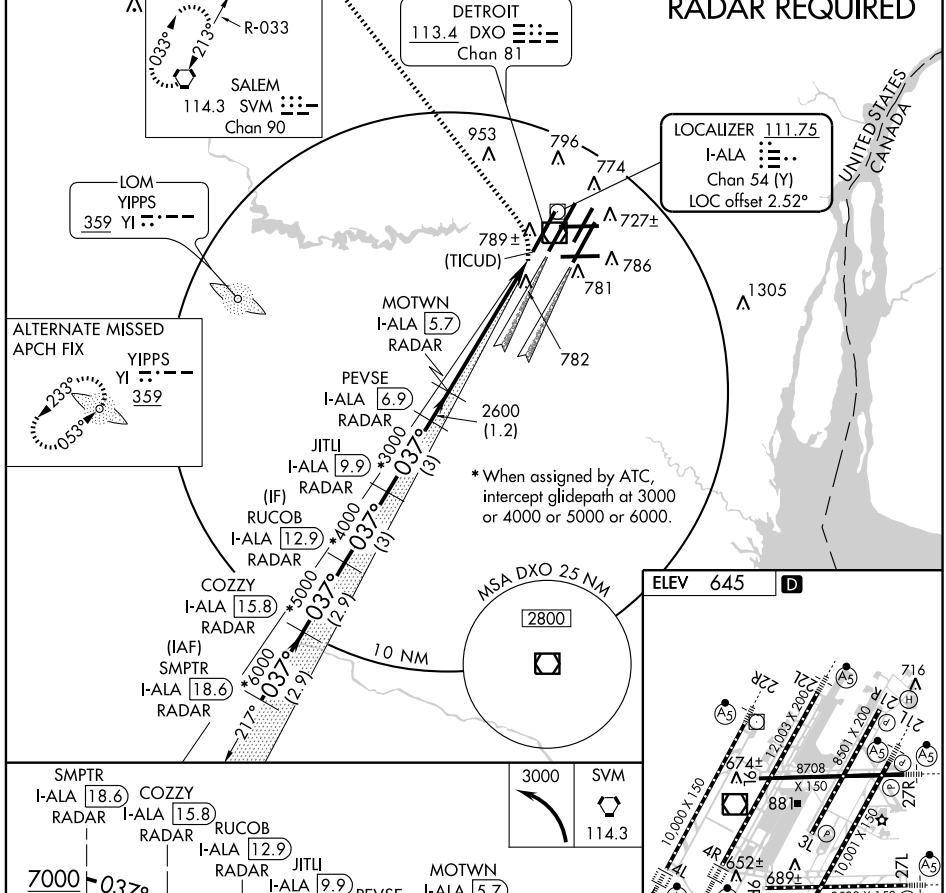
LOC/DME I-ALA	APP CRS	Rwy ldg	10000
111.75	037°	TDZE	645
Chan 54 (Y)		Apt Elev	645

DME or RADAR required. Procedure NA when glideslope not available. See additional requirements on AAUP. Dual VHF comm required. Simultaneous close parallel approach authorized with ILS PRM RWY 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III) and ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), ILS PRM Rwy 3R (CAT III).

ALSF-2

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 127.05	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



CATEGORY	A	B	C	D
S-ILS 4L	895/24 250 (300-½)			

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
- Exit the runway at Taxiway A7 (6700 ft) or A8 (7700 ft) whenever practical, see Taxiway Use below.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4L approach. If later advised to expect an ILS 4L Yankee approach, the ILS/PRM 4L chart may be used after completing the following briefing items:

(a) Minimums and missed approach procedures are unchanged.
(b) Monitor frequency no longer required.
(c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 4L Yankee approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

(a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metropolitan Wayne County Airport.

(b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

5. **Taxiway Use:** Because of the location of the offset LOC critical area, whenever practical, pilots should exit the runway at taxiway A7, 6700 ft or A8, 7700 ft. If feasible, do not stop on taxiways A9 and A10, or on taxiway A northeast of taxiway V.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

DETROIT, MICHIGAN

AL-119 (FAA)

ILS Y PRM RWY 22R (SIMULTANEOUS CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

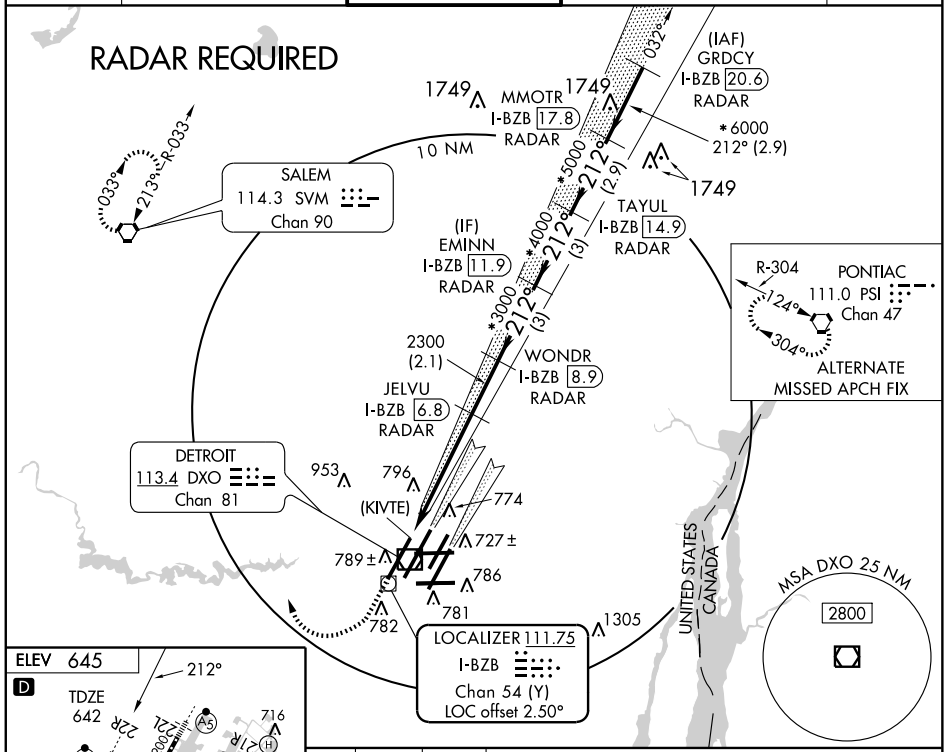
LOC/DME I-BZB	APP CRS	Rwy ldg	10000
111.75	212°	TDZE	642
Chan 54 (Y)		Apt Elev	645

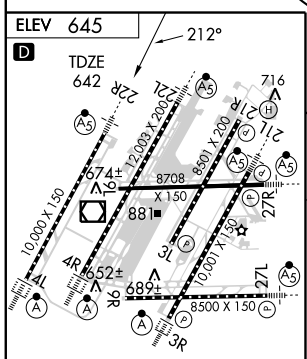
DME or RADAR Required. Procedure NA when glideslope not available. Simultaneous close parallel approach authorized with ILS PRM Rwy 22L and ILS PRM Rwy 21L. Dual VHF Comm Required. See additional requirements on AAUP.

MALSR

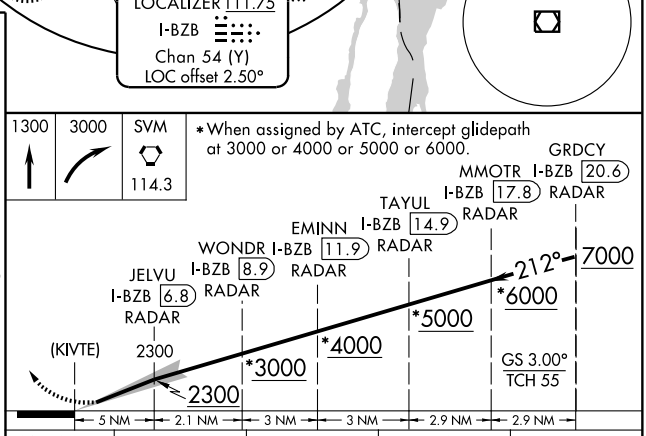
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST) PRM 127.05	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 22R	892/24 250 (300-½)			

ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)

Condensed Briefing Point:

- When instructed, immediately switch to the tower frequency and select the monitor frequency audio.
- Exit the runway at Taxiway A4 (6700 ft) or A3 (7700 ft) whenever practical, see Exit Taxiway Use below.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 22R approach. If later advised to expect an ILS 22R Yankee approach, the ILS/PRM 22R chart may be used after completing the following briefing items:

(a) Minimums and missed approach procedures are unchanged.
(b) Monitor frequency no longer required.
(c) A lower glideslope intercept altitude may be assigned when advised to expect ILS 22R Yankee approach.

2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.

3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.

(a) ATC Directed "Breakouts:" ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstuction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metropolitan Wayne County Airport.

(b) Phraseology - "TRAFFIC ALERT:" If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)," the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:

"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".

4. **ILS Navigation:** Descending on the ILS glideslope ensures complying with any charted crossing restrictions.

5. **Exit Taxiway Use:** Because of the location of the offset LOC critical area, whenever possible, pilots should exit the runway at taxiway A4, 6700 ft or A3, 7700 ft. If practical, do not stop on taxiway A between taxiway A3 and taxiway Q.

Special pilot training required. Pilots who are unable to participate, or dispatchers on their behalf, must contact the FAA Command Center prior to departure (1-800-333-4286 or 703-904-4452) to obtain an arrival reservation. Non-participating pilots enroute to DTW as an alternate, or trained pilots that are unexpectedly unable to participate due to in-flight circumstances will be afforded appropriate arrival services as operational conditions permit. Non-participating pilots shall notify the Cleveland ARTCC as soon as practical, but at least 100 miles from DTW.

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-ALA	APP CRS	Rwy ldg	10000
111.75	037°	TDZE	645
Chan 54 (Y)		Apt Elev	645

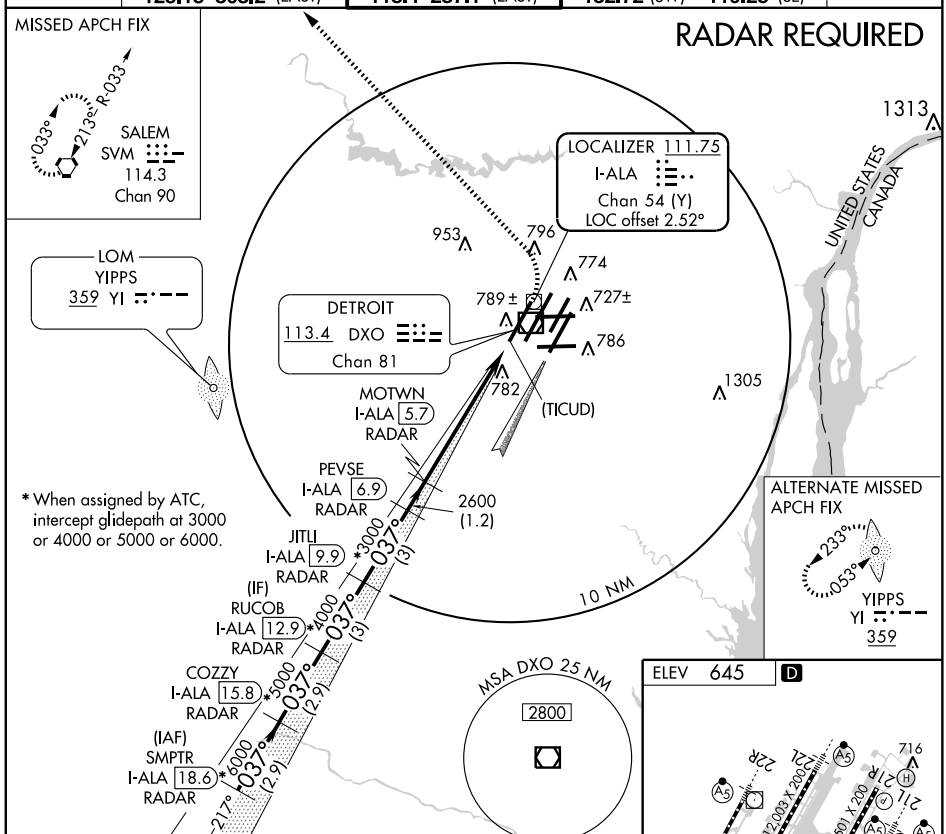
ILS Y RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DME or RADAR REQUIRED. LOC procedure NA during simultaneous operations. Simultaneous approach authorized with Rwy 3R. Procedure NA when glideslope not available.

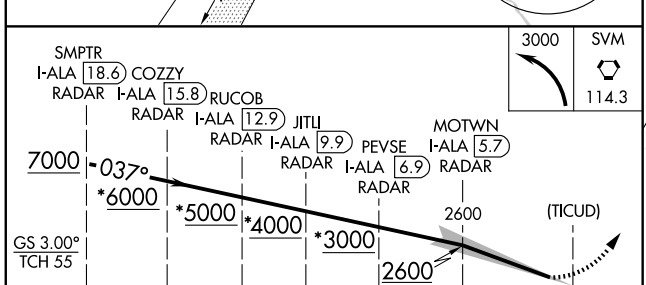
ALSF-2

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.



CATEGORY	A	B	C	D
S-ILS 4L	895/24 250 (300-½)			

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-BZB 111.75 Chan 54 (Y)	APP CRS 212°	Rwy ldg 10000 TDZE 642 Apt Elev 645

ILS Y RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DME or RADAR REQUIRED.
Simultaneous approach authorized with Rwy 21L.
Procedure NA when glideslope not available.
LOC procedure NA during simultaneous operations.

MALSR A5

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

RADAR REQUIRED

(IAF) GRDCY I-BZB 20.6 RADAR

MMOTR I-BZB 17.8 RADAR

1749 1749 1749

032° *6000 212° (2.9)

*5000 212° (2.9)

TAYUL I-BZB 14.9 RADAR

*4000 212° (3)

(IF) EMINN I-BZB 11.9 RADAR

*3000 212° (3)

WONDR I-BZB 8.9 RADAR

2300 212° (2.1)

JELVU I-BZB 6.8 RADAR

(KIVTE) 774

953 796

789± 727± 786 781 782 1305

SALEM 114.3 SVM Chan 90

033° 213° R-033

DETROIT 113.4 DXO Chan 81

ALTERNATE MISSED APCH FIX
PONTIAC PSI 111.0 Chan 47
304° 124° 304°

UNITED STATES CANADA

MSA DXO 25 NM 2800

LOCALIZER 111.75
I-BZB
Chan 54 (Y)
LOC offset 2.50°

ELEV 645 D

212°

TDZE 642

22R 22L 12,003 X 200 8500 X 200 21R 21L 716 674± 8708 X 150 881 27R 9L 10,000 X 150 4L 4R 652± 9R 689± 3L 10,001 X 150 27L 8500 X 150 3R

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

1300	3000	SVM 114.3

* When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.

GRDCY I-BZB 20.6 RADAR
MMOTR I-BZB 17.8 RADAR
TAYUL I-BZB 14.9 RADAR
EMINN I-BZB 11.9 RADAR
WONDR I-BZB 8.9 RADAR
JELVU I-BZB 6.8 RADAR
(KIVTE) 2300

212° 7000 *6000 *5000 *4000 *3000 2300

GS 3.00°
TCH 55

5 NM 2.1 NM 3 NM 3 NM 2.9 NM 2.9 NM

CATEGORY	A	B	C	D
S-ILS 22R	892/24 250 (300-½)			

ILS Z or LOC RWY 4L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

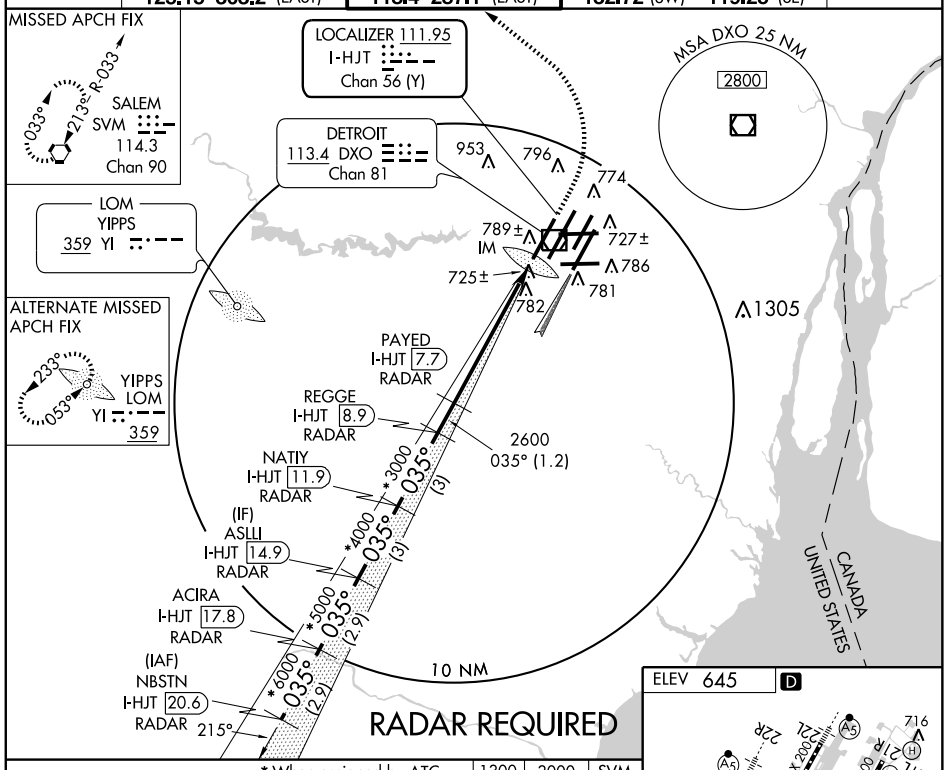
LOC/DME I-HJT	APP CRS	Rwy ldg	10000
111.95	035°	TDZE	645
Chan 56 (Y)		Apt Elev	645

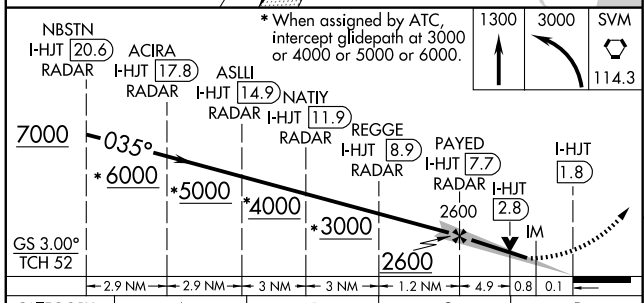
DME or RADAR Required.
Simultaneous approach authorized with Rwy 3R.
LOC procedure NA during simultaneous operations.

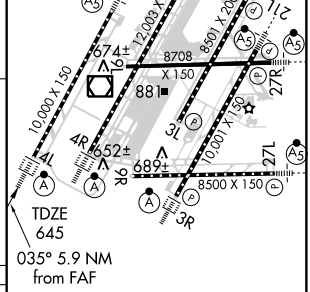
ALSF-2

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 4L	845/18 200 (200-½)			
S-LOC 4L	1000/24 355 (400-½)			1000/40 355 (400-¾)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

FAF to MAP 5.9 NM

Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

ILS Z or LOC RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

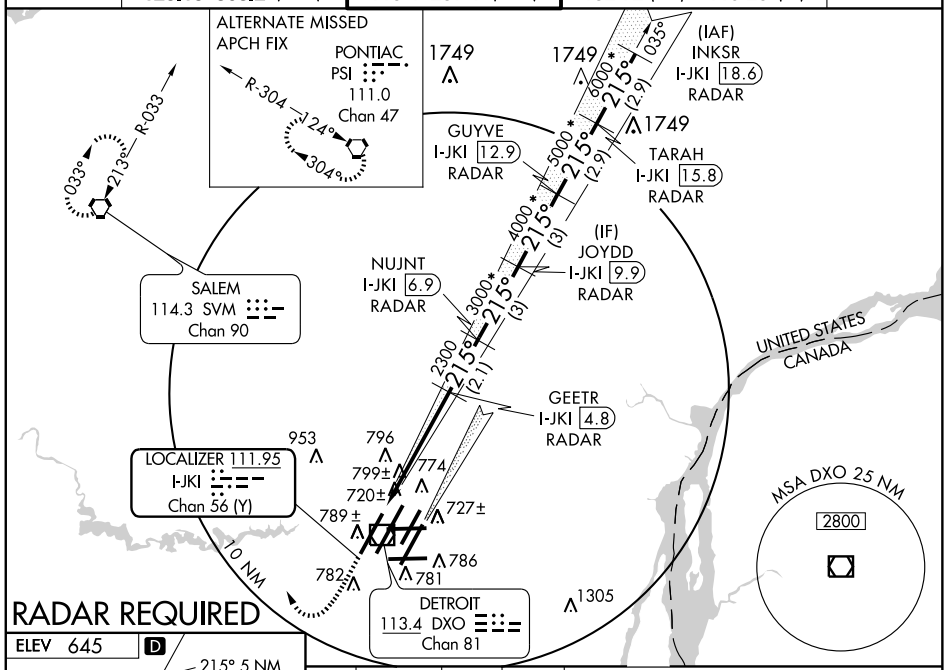
LOC/DME I-JKI	APP CRS	Rwy ldg	10,000
111.95	215°	TDZE	642
Chan 56 (Y)		Apt Elev	645

Simultaneous approach authorized with Rwy 21L.
**RVR 1800 authorized with the use of FD or AP or HUD to DA. DME or RADAR Required. LOC procedure NA during simultaneous operations.

MALSR

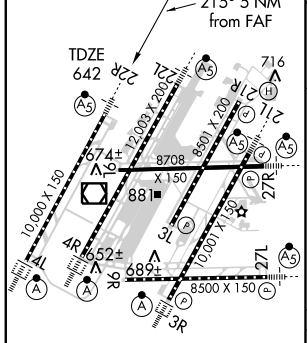
MISSED APPROACH: Climb to 1300 then climbing right turn via heading 225° to 3000 then right turn direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



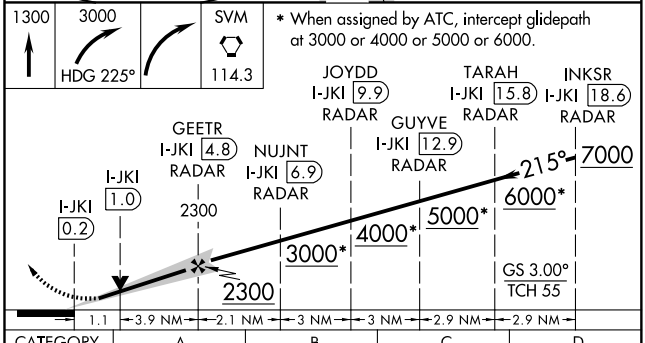
RADAR REQUIRED

ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40



CATEGORY	A	B	C	D
S-ILS 22R	**842/24 200 (200-½)			
S-LOC 22R	1060/24 418 (500-½)		1060/40 418 (500-¾)	
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-L 14 JAN 2010 to 11 FEB 2010

ILS Z RWY 4L (CAT II)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

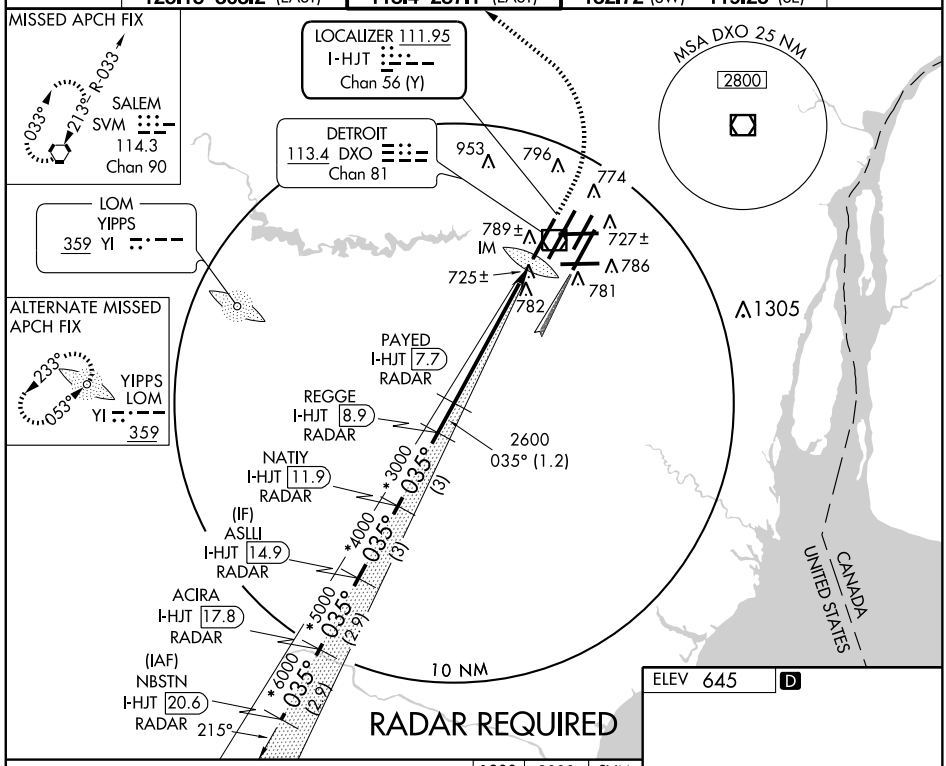
LOC/DME I-HJT	APP CRS	Rwy ldg	10,000
111.95	035°	TDZE	645
Chan 56 (Y)		Apt Elev	645

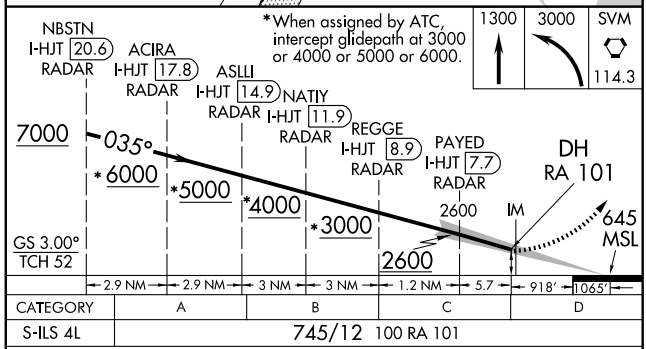
Simultaneous approach authorized with Rwy 3R. DME or RADAR Required.

ALSF-2

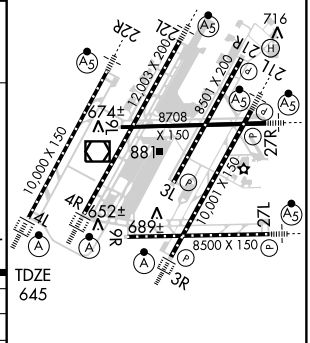
MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ILS Z RWY 4L (CAT III)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

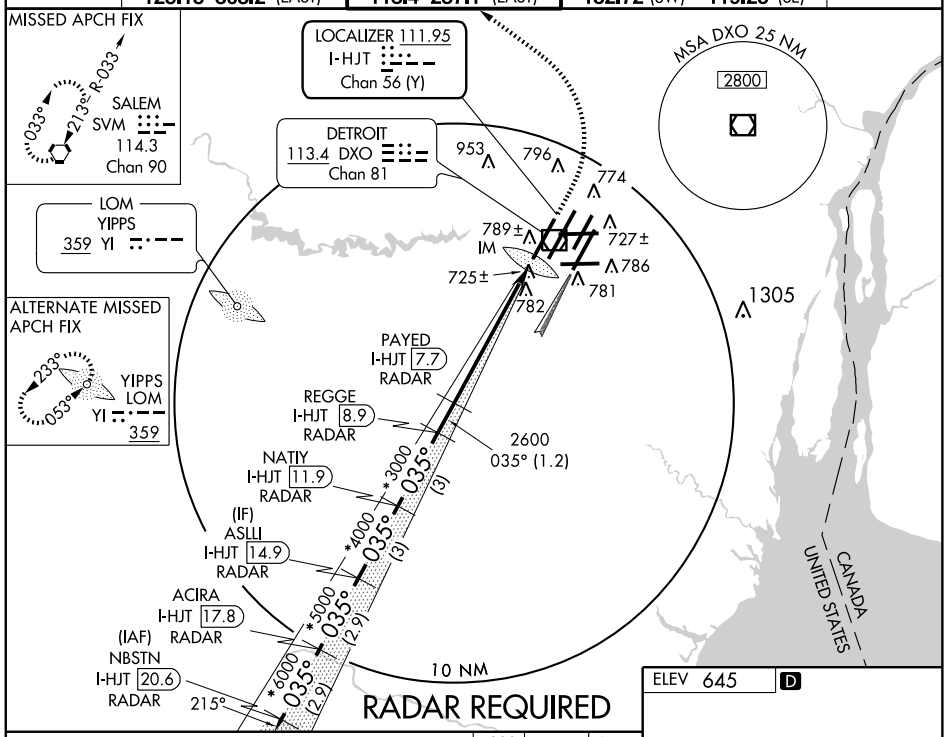
LOC/DME I-HJT	APP CRS	Rwy ldg	10,000
111.95	035°	TDZE	645
Chan 56 (Y)		Apt Elev	645

Simultaneous approach authorized with Rwy 3R. DME or RADAR Required.

ALSF-2

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct SVM VORTAC and hold.

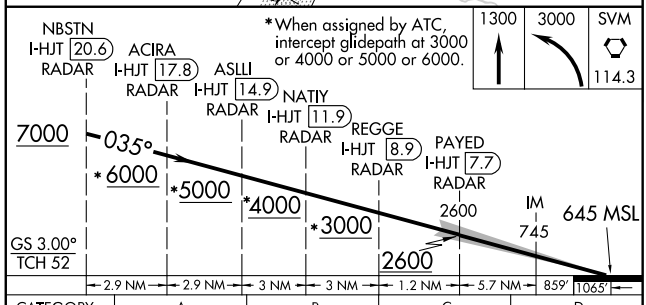
ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



RADAR REQUIRED

*When assigned by ATC, intercept glidepath at 3000 or 4000 or 5000 or 6000.

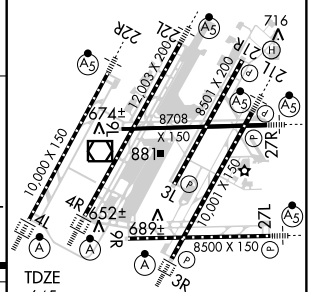
1300	3000	SVM
		114.3



CATEGORY	A	B	C	D
S-ILS 4L		CAT IIIA	RVR 07	
S-ILS 4L		CAT IIIB	RVR 06	
S-ILS 4L		CAT IIIC	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 D



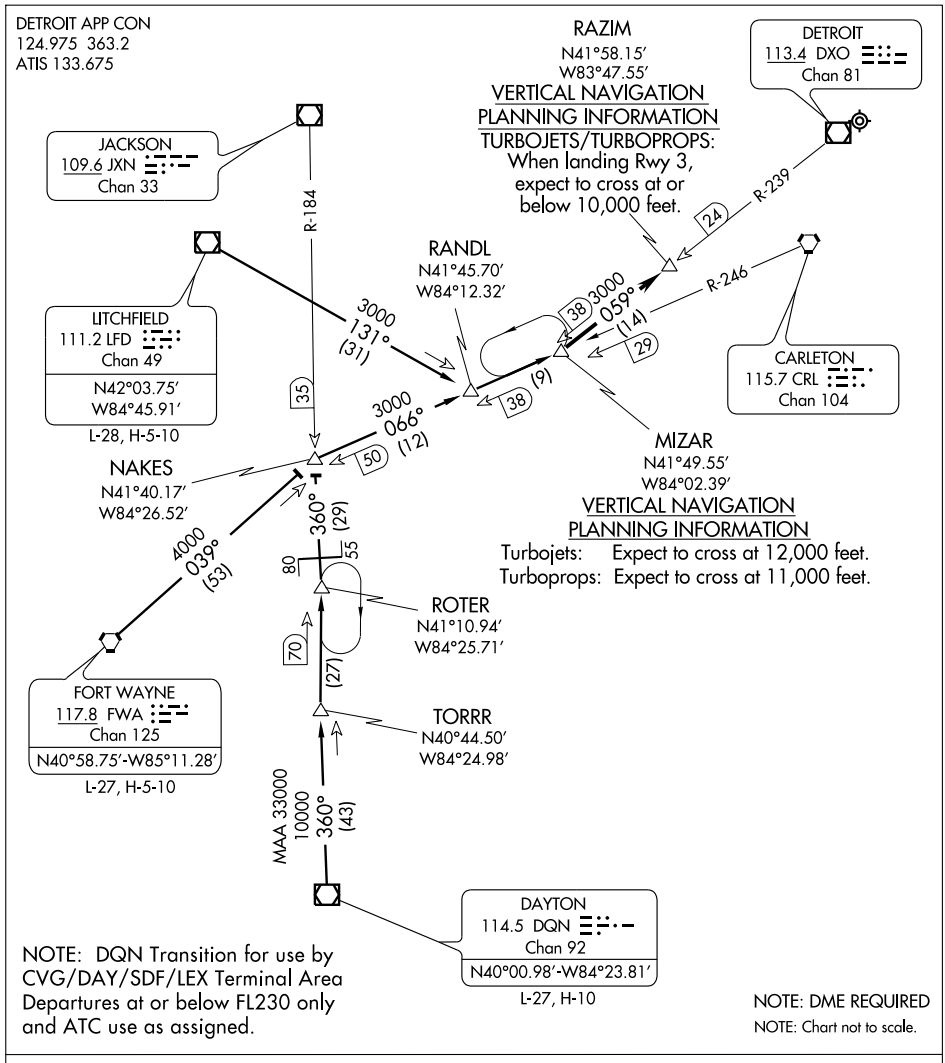
TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

MIZAR THREE ARRIVAL

ST-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY
DETROIT, MICHIGAN



DAYTON TRANSITION (DQN.MIZAR3): From over DQN VOR/DME via DQN R-360 and JXN R-184 to NAKES INT, then via CRL VORTAC R-246 to MIZAR DME. Thence. . . .

FORT WAYNE TRANSITION (FWA.MIZAR3): From over FWA VORTAC via FWA R-039 to NAKES INT, then via CRL R-246 to MIZAR DME. Thence. . . .

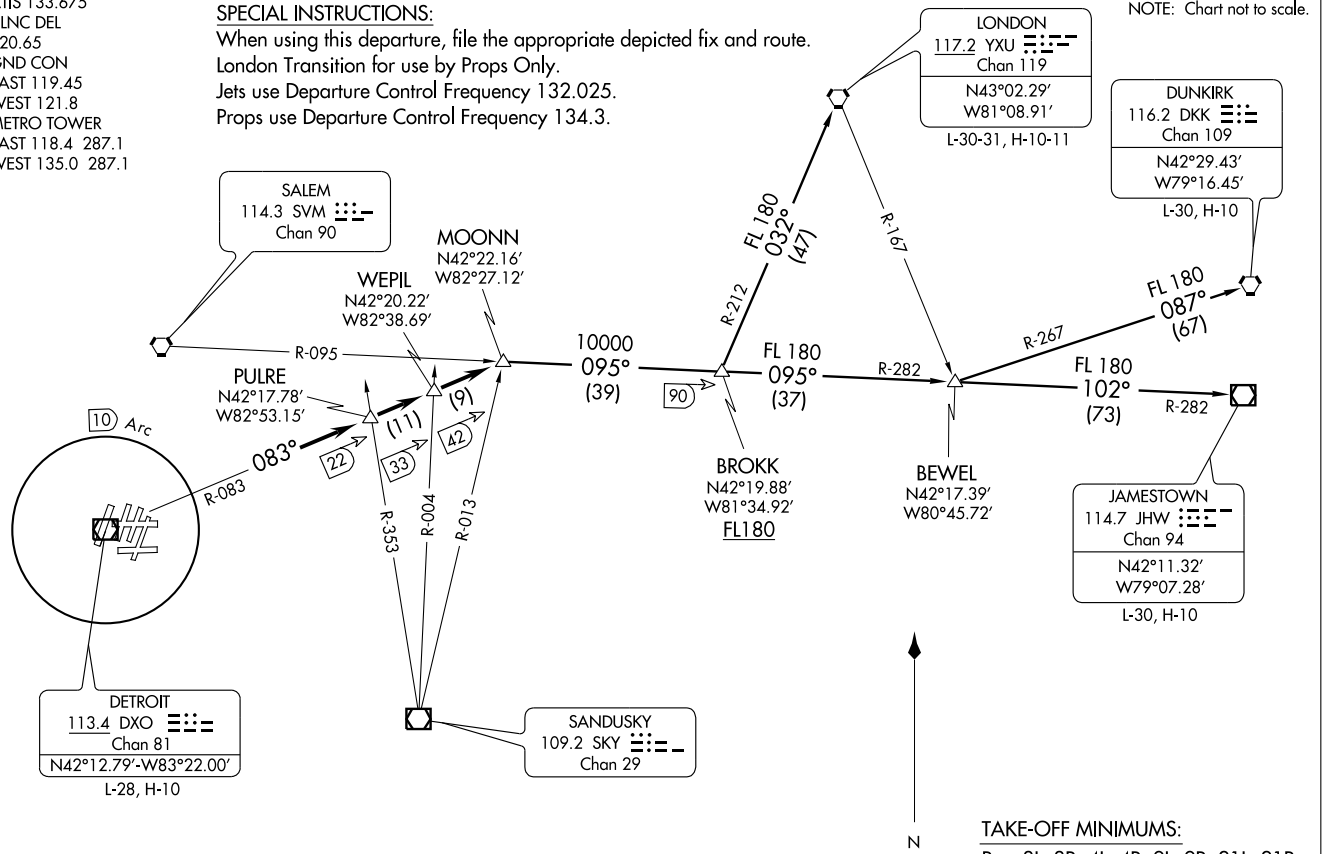
LITCHFIELD TRANSITION (LFD.MIZAR3): From over LFD VOR/DME via LFD R-131 to RANDL INT, then via CRL R-246 to MIZAR DME. Thence. . . .

. . . . From over MIZAR DME via DXO VOR/DME R-239 to RAZIM DME. Expect radar vectors to final approach course.

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.
London Transition for use by Props Only.
Jets use Departure Control Frequency 132.025.
Props use Departure Control Frequency 134.3.

NOTE: Chart not to scale.



TAKE-OFF MINIMUMS:
Rwy 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R, 22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

(MOONN2.MOONN) 07354
MOONN TWO DEPARTURE
DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN
SL-119 (FAA)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-083 to MOONN INT, then via (transition). Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/ flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

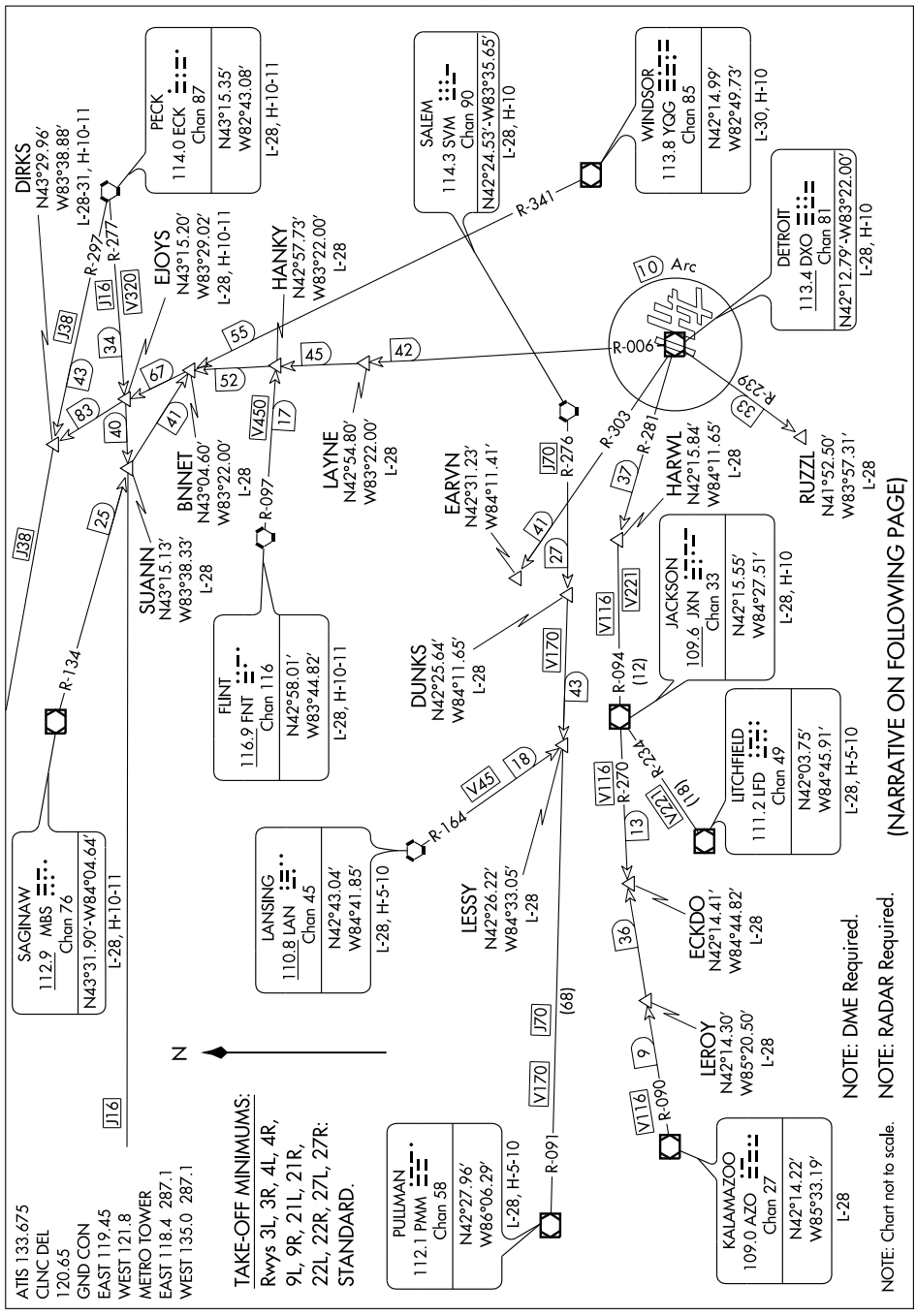
Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple transmission towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

PALACE THREE DEPARTURE

SL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned Airway or Radial then proceed to the assigned departure fix, thence via the assigned route. Jets maintain 10,000 feet, cross the DXO VOR/DME 10 DME Arc at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below. Prop aircraft departing Rwy 21L/R and 22L/R westbound cross DXO 3.5 DME at or above 2500 MSL. If unable advise ATC prior to departure. Jets use Departure Control Frequency 125.525. Props use Departure Control Frequency 118.95.

TAKE-OFF OBSTACLES

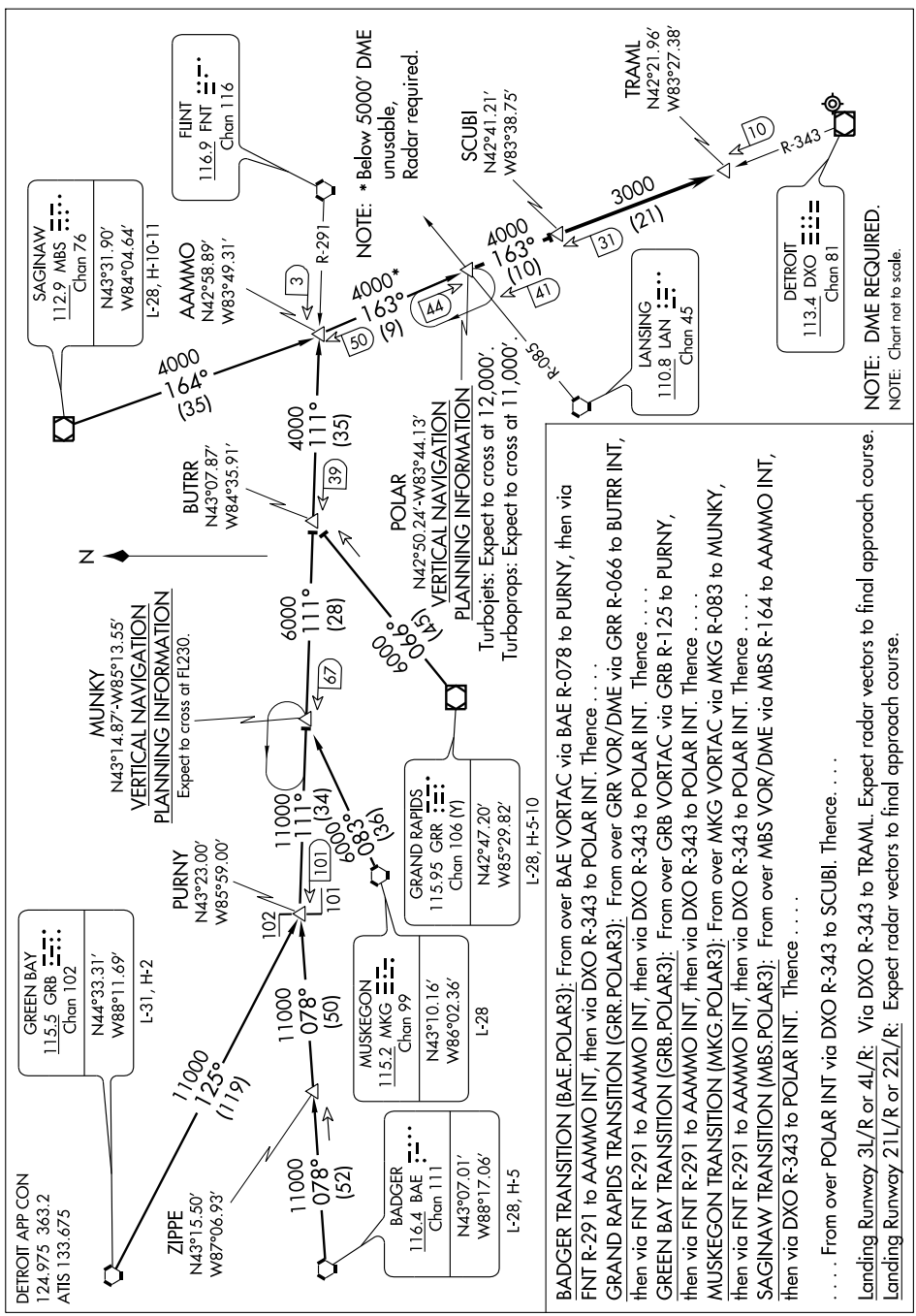
Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple transmission towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR, 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

POLAR THREE ARRIVAL

ST-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY
DETROIT, MICHIGAN



BADGER TRANSITION (BAE.POLAR3): From over BAE VORTAC via BAE R-078 to PURNY, then via FNT R-291 to AAMMO INT, then via DXO R-343 to POLAR INT. Thence . . . .

GRAND RAPIDS TRANSITION (GRR.POLAR3): From over GRR VOR/DME via GRR R-066 to BUTRR INT, then via FNT R-291 to AAMMO INT, then via DXO R-343 to POLAR INT. Thence . . . .

GREEN BAY TRANSITION (GRB.POLAR3): From over GRB VORTAC via GRB R-125 to PURNY, then via FNT R-291 to AAMMO INT, then via DXO R-343 to POLAR INT. Thence . . . .

MUSKEGON TRANSITION (MKG.POLAR3): From over MKG VORTAC via MKG R-083 to MUNKY, then via FNT R-291 to AAMMO INT, then via DXO R-343 to POLAR INT. Thence . . . .

SAGINAW TRANSITION (MBS.POLAR3): From over MBS VOR/DME via MBS R-164 to AAMMO INT, then via DXO R-343 to POLAR INT. Thence . . . .

. . . . From over POLAR INT via DXO R-343 to SCUBI. Thence. . . .

Landing Runway 3L/R or 4L/R: Via DXO R-343 to TRAML. Expect radar vectors to final approach course.

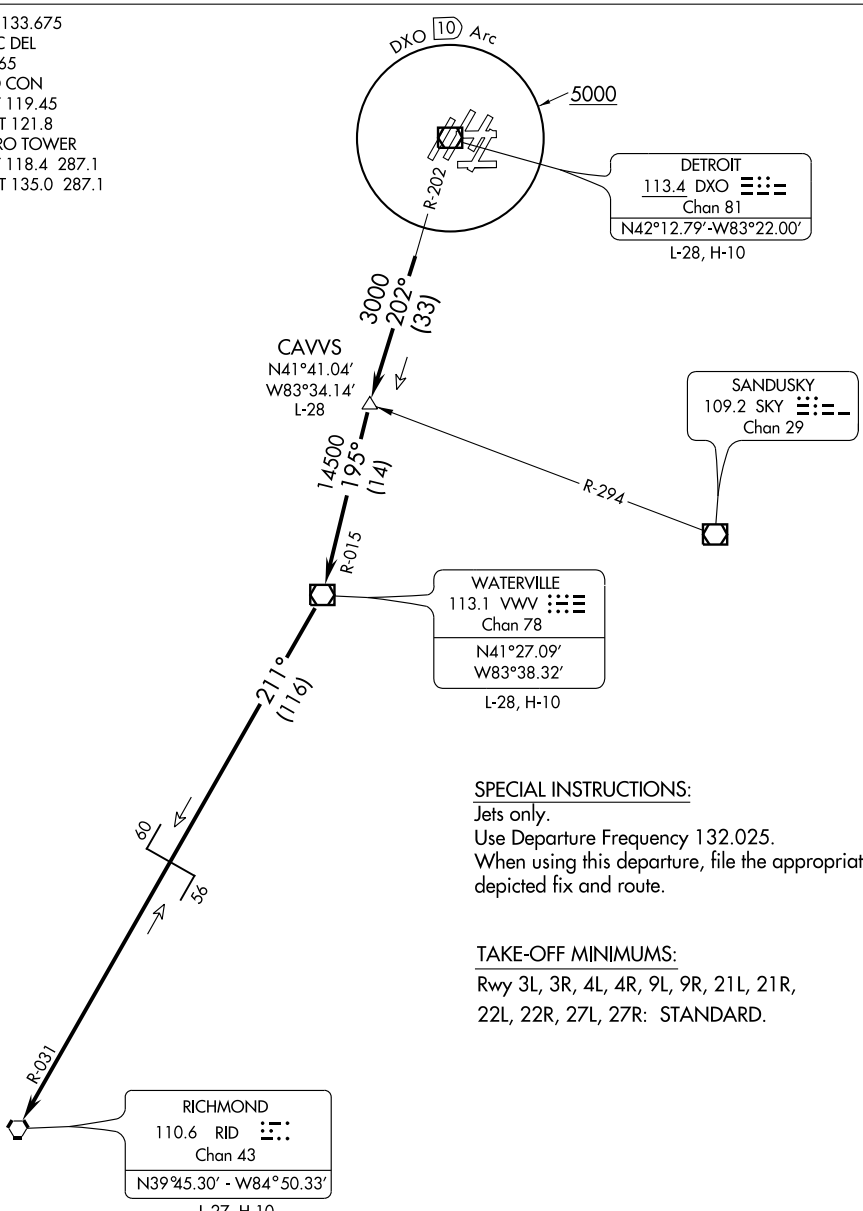
Landing Runway 21L/R or 22L/R: Expect radar vectors to final approach course.

RICHMOND FOUR DEPARTURE

SL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1



SPECIAL INSTRUCTIONS:
Jets only.
Use Departure Frequency 132.025.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwy 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R, 22L, 22R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 10,000 feet, cross DXO 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 3R:	Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L:	Multiple transmission towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL. Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R:	Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L:	Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R:	Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L:	Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L:	Multiple trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R:	Rod on ASR, 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

WAAS CH 61304 W03A	APP CRS 035°	Rwy ldg 10001 TDZE 633 Apt Elev 645

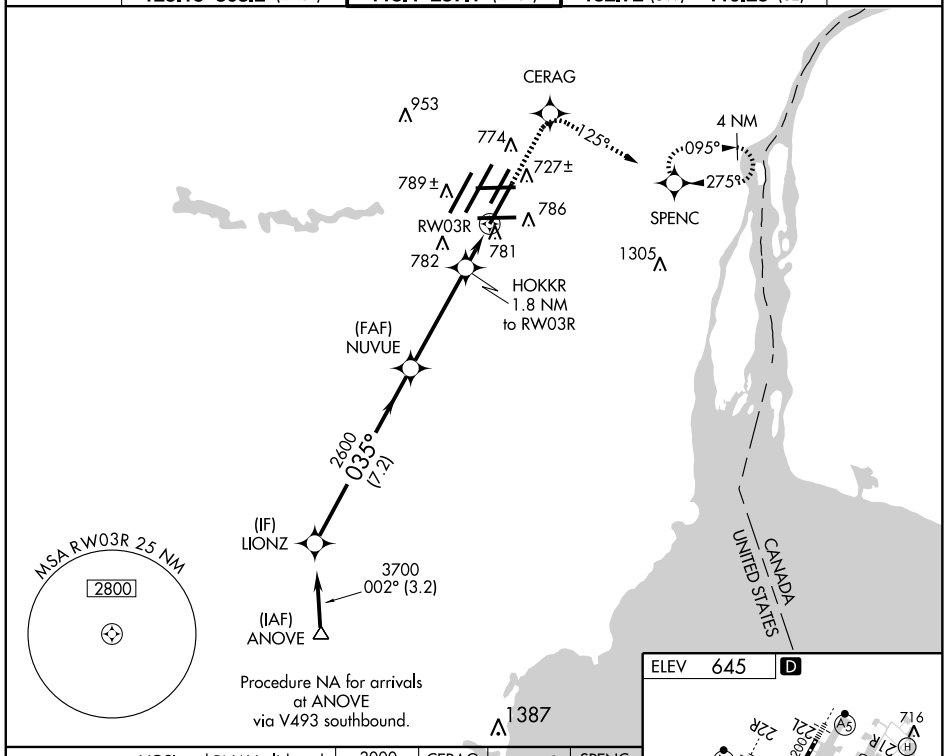
RNAV (GPS) RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

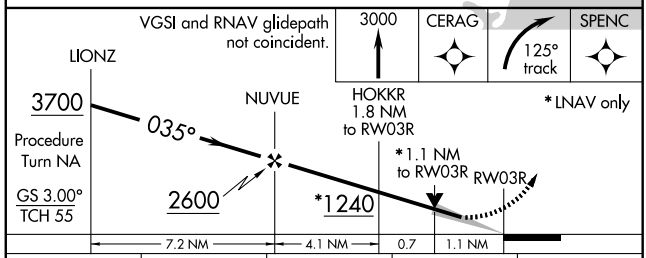
For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

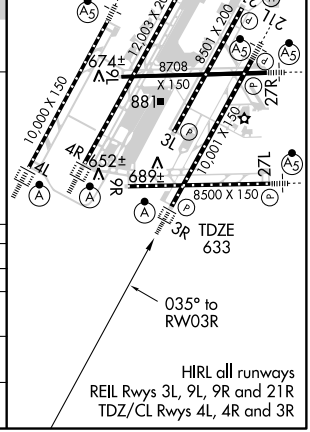
ALSF-2

MISSED APPROACH: Climb to 3000 direct CERAG and right turn via 125° track to SPENC and hold, continue climb-in-hold to 3000.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







CATEGORY	A	B	C	D
LPV DA	957/24 324 (400-½)			
LNAV/VNAV DA	1031/40 398 (400-¾)			
LNAV MDA	1060/24 427 (500-½)		1060/40 427 (500-¾)	1060/50 427 (500-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 77520 W04A	APP CRS 035°	Rwy ldg 10000 TDZE 645 Apt Elev 645

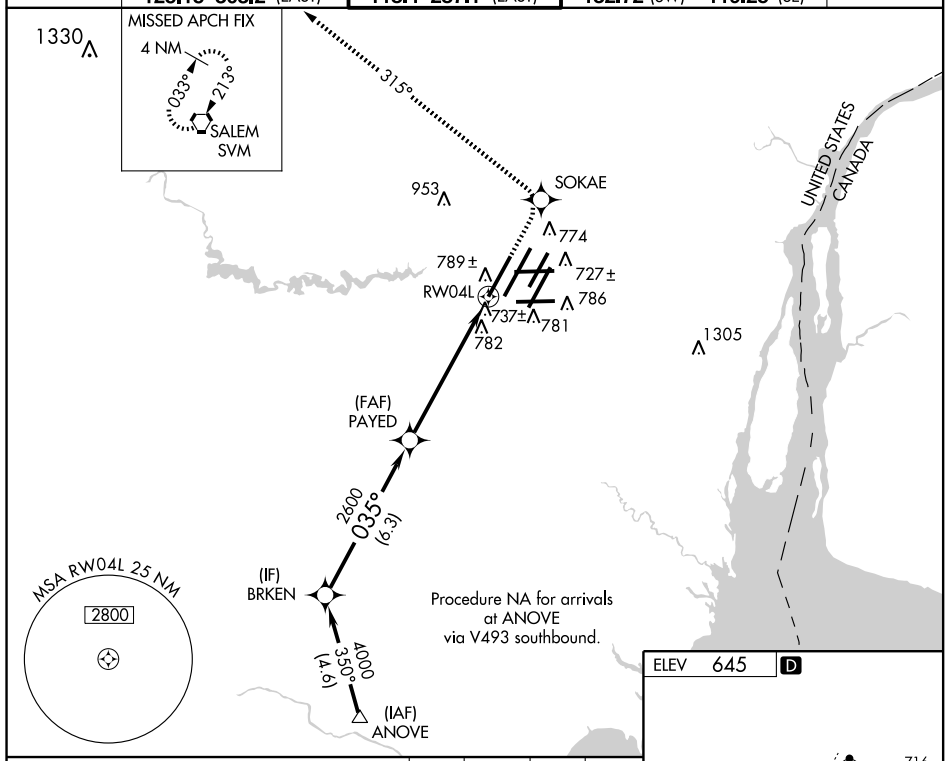
RNAV (GPS) RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

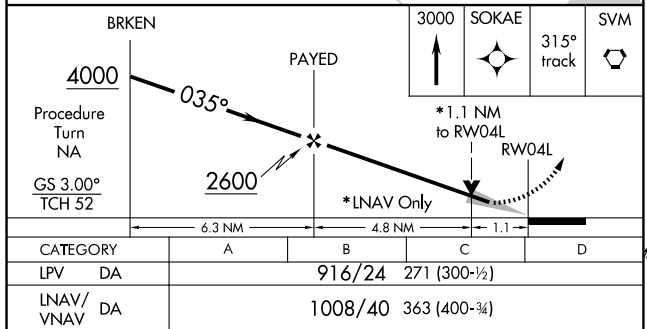
For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

ALSF-2

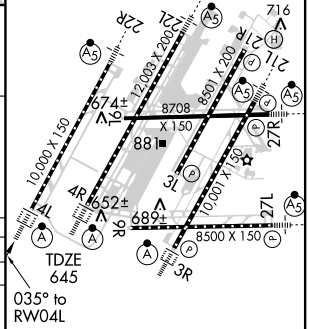
MISSED APPROACH: Climb to 3000 direct SOKAE and via 315° track to SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





CATEGORY	A	B	C	D
LPV DA	916/24 271 (300-½)			
LNAV/VNAV DA	1008/40 363 (400-¾)			
LNAV MDA	1040/24 395 (400-½)			1040/50 395 (400-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

WAAS CH 63004 W04A	APP CRS 035°	Rwy ldg 12003 TDZE 638 Apt Elev 645

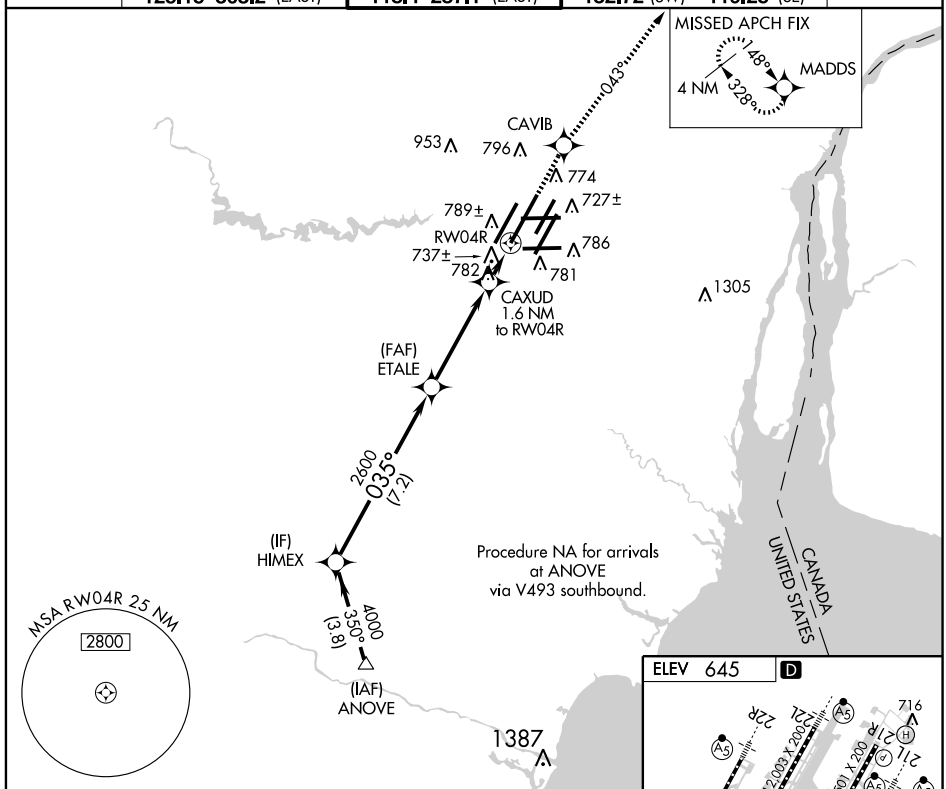
RNAV (GPS) RWY 4R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

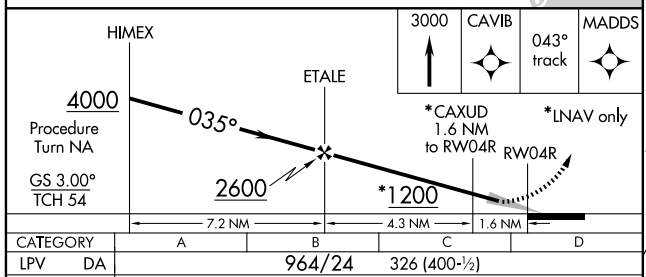
For inoperative ALSF-2, increase LPV all Cats visibility to RVR 5000, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above -47°C (116°F). DME/DME RNP-0.3 NA.

ALSF-2

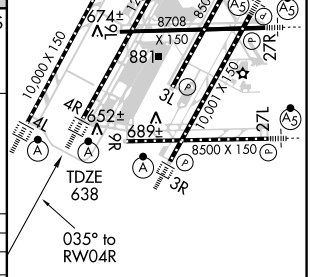
MISSED APPROACH: Climb to 3000 direct CAVIB and via 043° track to MADDS and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





CATEGORY	A	B	C	D
LPV DA	964/24		326 (400-½)	
LNAV/VNAV DA	1015/40		377 (400-¾)	
LNAV MDA	1060/24	422 (500-½)	1060/40 422 (500-¾)	1060/50 422 (500-1)
CIRCLING	1200-1	555 (600-1)	1200-1½ 555 (600-1½)	1200-2 555 (600-2)



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 81820 W21A	APP CRS 215°	Rwy ldg 10001 TDZE 632 Apt Elev 645

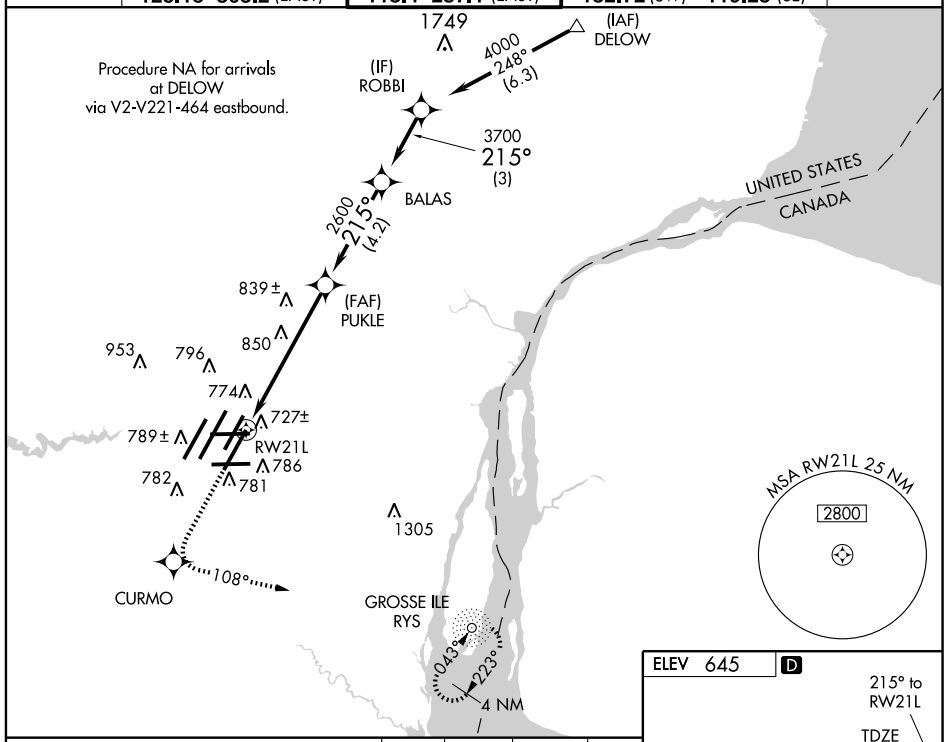
RNAV (GPS) RWY 21L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

For inoperative MALSR increase LPV all Cats visibility to RVR 5000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

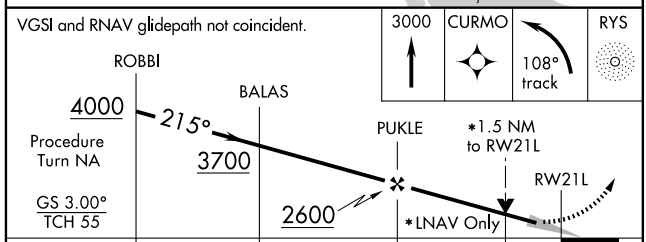
MALSR

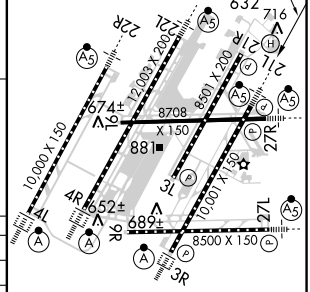
MISSED APPROACH: Climb to 3000 direct CURMO and left turn via 108° track to RYS NDB and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



VGSI and RNAV glidepath not coincident.





TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
LPV DA	922/24 290 (300-½)			
LNAV/VNAV DA	1118/60 486 (500-1¼)			
LNAV MDA	1180/24 548 (600-½)		1180/50 548 (600-1)	1180/60 548 (600-1¼)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 99601 W22A	APP CRS 215°	Rwy ldg 12003 TDZE 637 Apt Elev 645

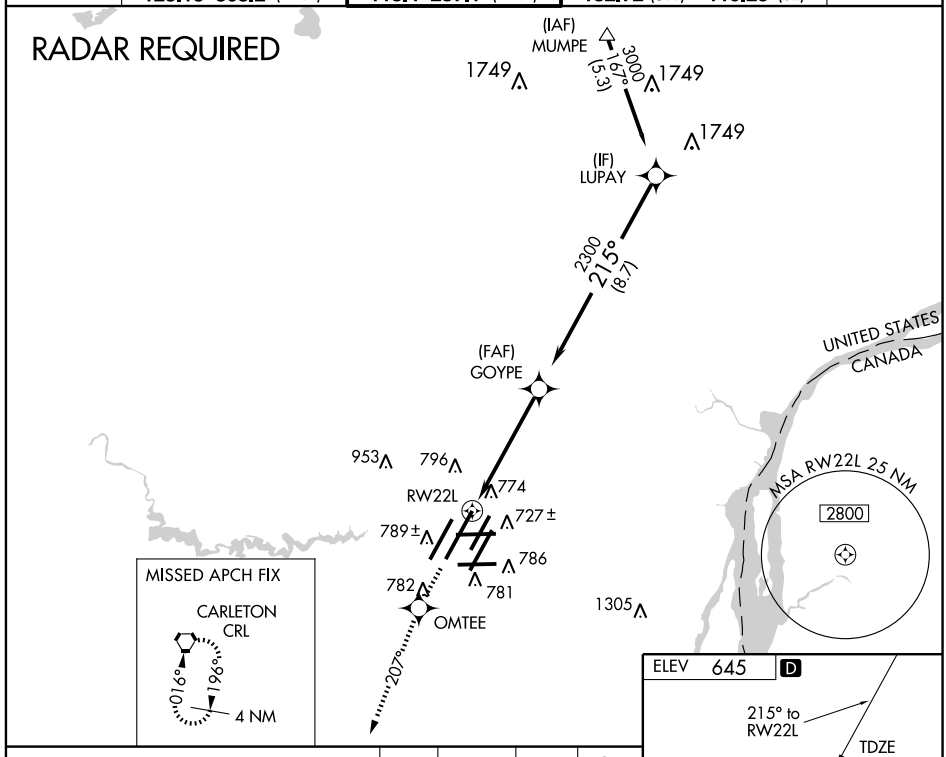
RNAV (GPS) RWY 22L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

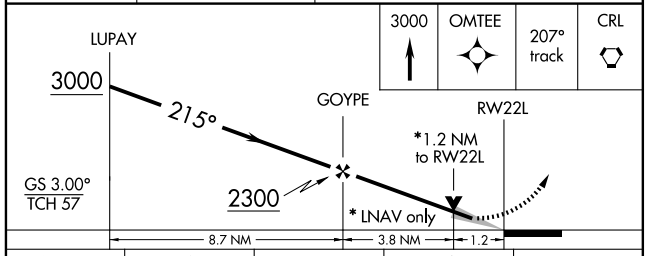
For inoperative MALSR, increase LPV all Cats visibility to RVR 5000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

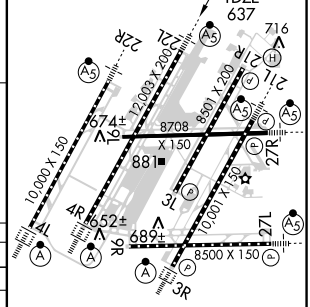
MALSR

MISSED APPROACH: Climb to 3000 direct OMTEE and via 207° track to CRL VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65







TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
LPV DA	932/24 295 (300-½)			
LNAV/VNAV DA	1117/60 480 (500-1¼)			
LNAV MDA	1080/24 443 (500-½)		1080/40 443 (500-¾)	1080/50 443 (500-1)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 82001 W22B	APP CRS 215°	Rwy ldg 10000 TDZE 642 Apt Elev 645

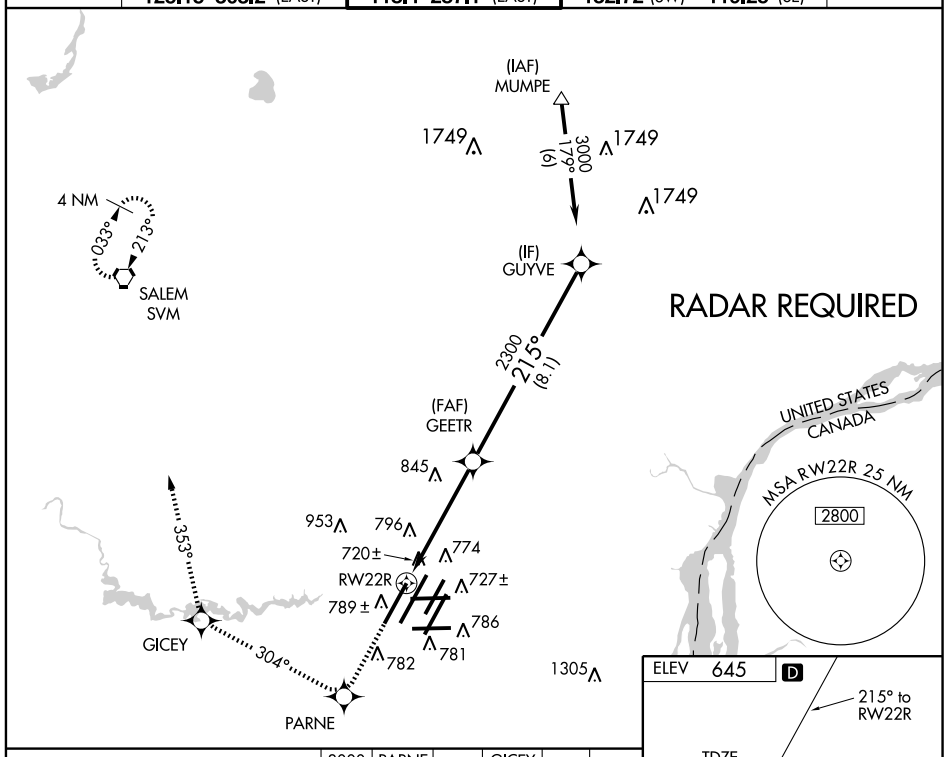
RNAV (GPS) RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

For inoperative MALSR, increase LPV all Cats visibility to RVR 5000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

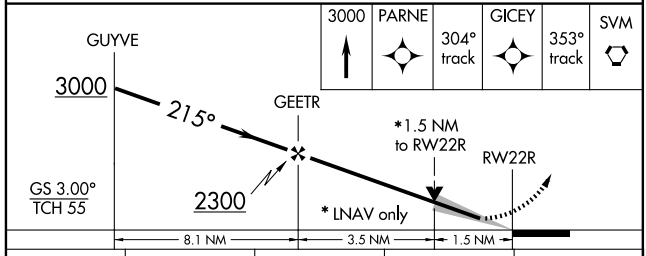
MALSR

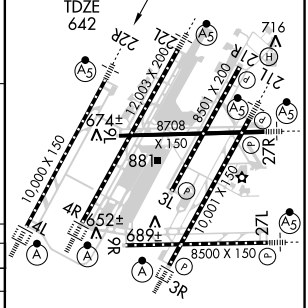
MISSED APPROACH: Climb to 3000 direct PARNE and via 304° track to GICEY and via 353° track to SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65



3000	PARNE	304° track	GICEY	353° track	SVM





TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
LPV DA	892/24 250 (300-½)			
LNAV/VNAV DA	1006/40 364 (400-¾)			
LNAV MDA	1160/24 518 (600-½)		1160/50 518 (600-1)	1160/60 518 (600-1¼)
CIRCLING	1200-1 555 (600-1)		1200-1½ 555 (600-1½)	1200-2 555 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 53300 W27B	APP CRS 275°	Rwy ldg 8500 TDZE 630 Apt Elev 645

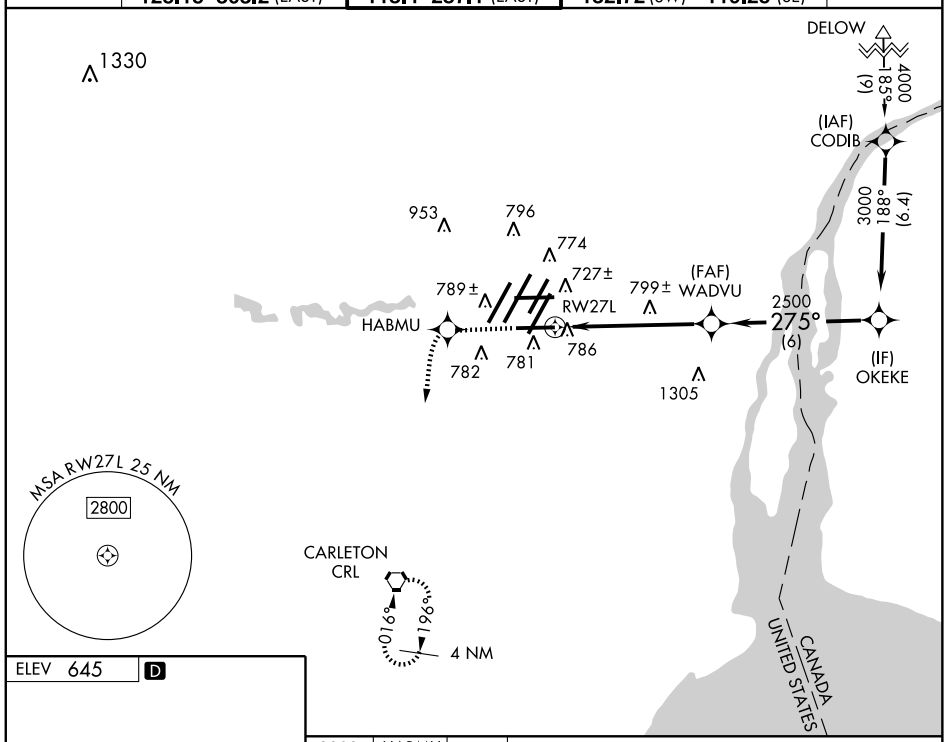
RNAV (GPS) RWY 27L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). DME/DME RNP-0.3 NA. For inoperative MALSR increase LPV visibility to RVR 5000 all Cats.

MALSR

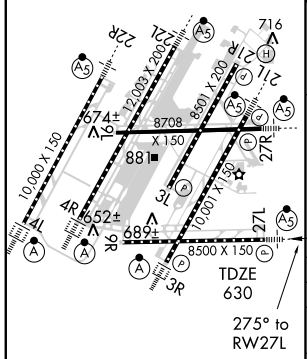
MISSED APPROACH: Climb to 3000 direct HABMU and via 198° track to CRL VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65

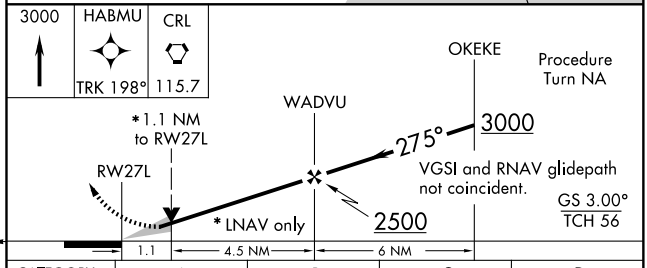


EC-1. 14 JAN 2010 to 11 FEB 2010

ELEV 645 D



TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
LPV DA	930/24 299 (300-½)			
LNAV/VNAV DA	1040/50 410 (400-1)			
LNAV MDA	1060/24 430 (500-½)		1060/40 430 (500-¾)	1060/50 430 (500-1)
CIRCLING	1200-1½ 555 (600-1½)			1200-2 555 (600-2)

WAAS CH 86220 W27A	APP CRS 275°	Rwy ldg 8708 TDZE 635 Apt Elev 645

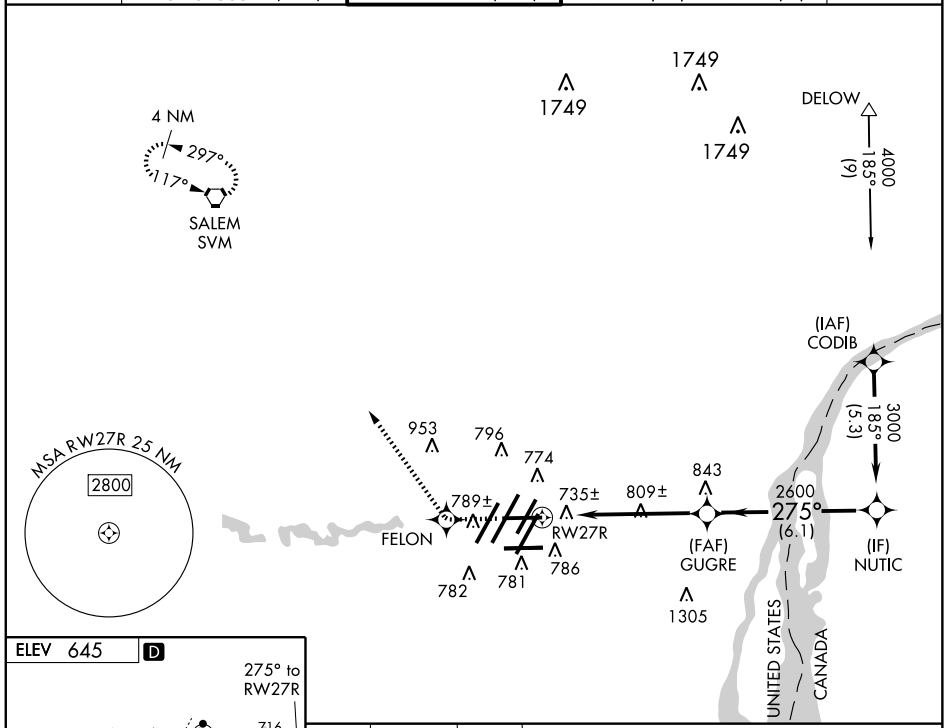
RNAV (GPS) RWY 27R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

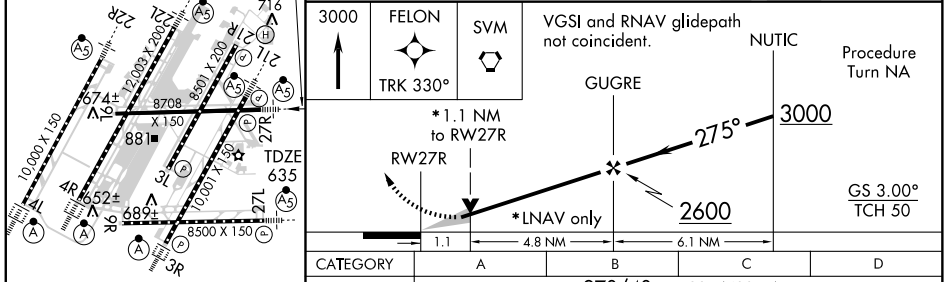
Baro-VNAV NA below -16°C (4°F). DME/DME RNP-0.3 NA
For inoperative MALSR, increase LPV visibility to RVR 6000
all Cats, LNAV Cat D visibility to RVR 6000.

MALSR

MISSED APPROACH: Climb to 3000 direct FELON and via 330° track to SVM VORTAC and hold.

ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL
133.675	124.05 363.2 (WEST) 125.15 363.2 (EAST)	135.0 287.1 (WEST) 118.4 287.1 (EAST)	121.8 (NW) 119.45 (NE) 132.72 (SW) 119.25 (SE)	120.65





CATEGORY	A	B	C	D
LPV DA	970/40 335 (400-¾)			
LNAV/VNAV DA	1040/50 405 (400-1)			
LNAV MDA	1060/24 425 (500-½)		1060/40 425 (500-¾)	1060/50 425 (500-1)
CIRCLING	1200-1½ 555 (600-1½)			1200-2 555 (600-2)

TDZ/CL Rwys 4L, 4R and 3R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1. 14 JAN 2010 to 11 FEB 2010

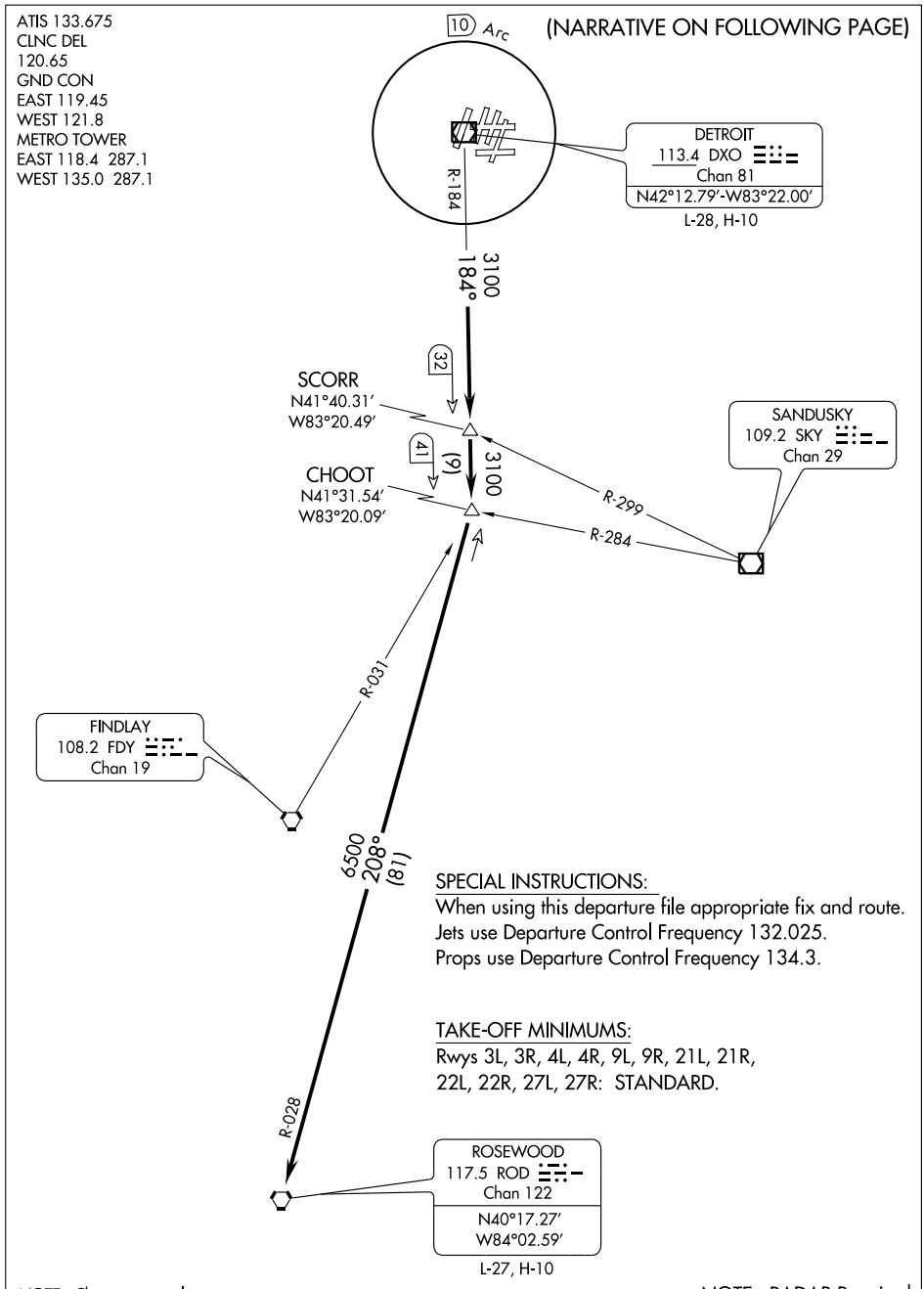
(ROD2.ROD) 07354

ROSEWOOD TWO DEPARTURE

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
SL-119 (FAA)
DETROIT, MICHIGAN

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1

(NARRATIVE ON FOLLOWING PAGE)



SPECIAL INSTRUCTIONS:
When using this departure file appropriate fix and route.
Jets use Departure Control Frequency 132.025.
Props use Departure Control Frequency 134.3.

TAKE-OFF MINIMUMS:
Rwys 3L, 3R, 4L, 4R, 9L, 9R, 21L, 21R,
22L, 22R, 27L, 27R: STANDARD.

NOTE: Chart not to scale.

NOTE: RADAR Required.

EC-1, 14 JAN 2010 to 11 FEB 2010

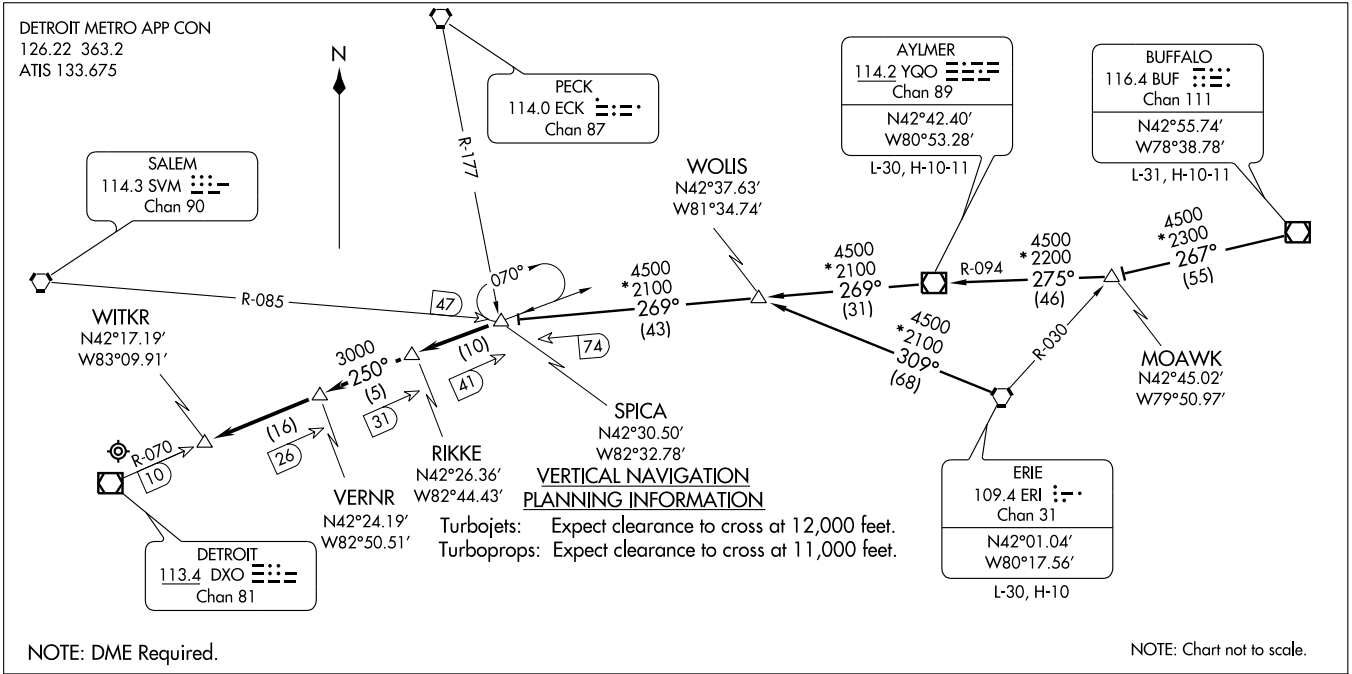
DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to intercept DXO VOR/DME R-184 to CHOOT INT/DXO 41 DME (MEA 3100), then right turn to via ROD R-028 to ROD VORTAC (MEA 6500).
Jets maintain 10,000 feet, cross DXO VOR/DME 10 DME at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure.
Props maintain 4,000 feet or lower assigned altitude. Expect clearance to filed altitude/flight level 10 minutes after departure.

TAKE-OFF OBSTACLES

Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple transmission towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on building 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

SPICA TWO ARRIVAL

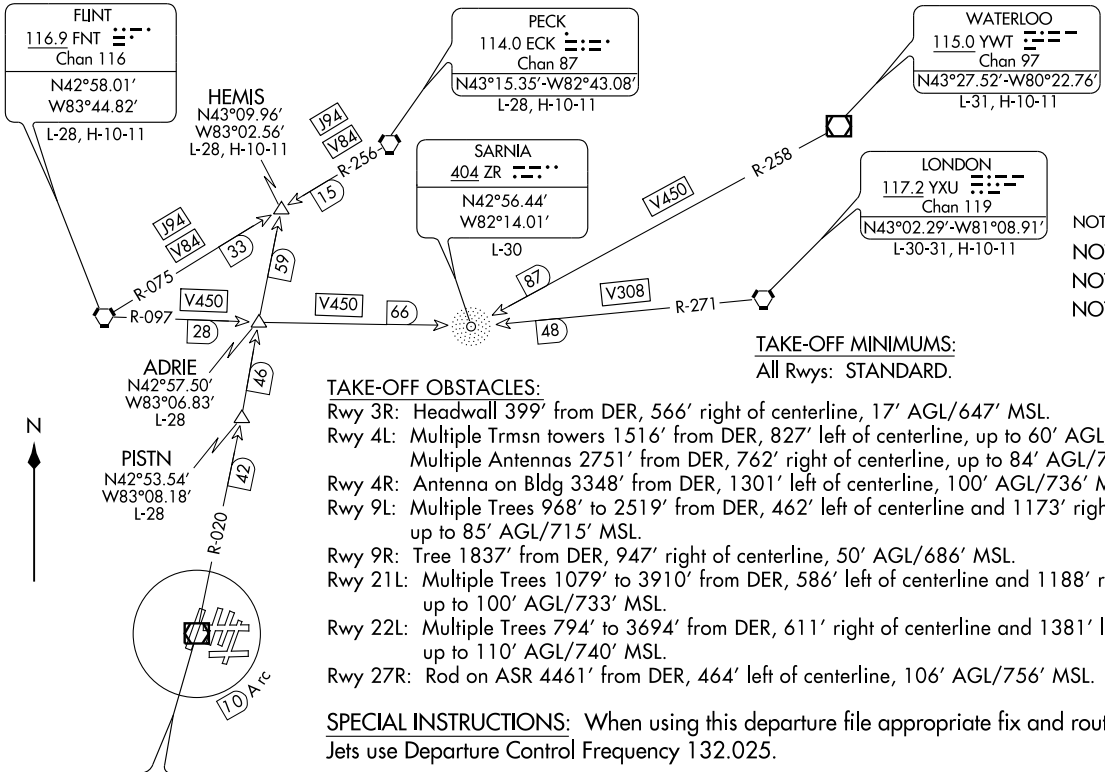


AYLMER TRANSITION (YQO.SPICA2):From over YQO VOR/DME via YQO R-269 to SPICA 74 DME FIX.Thence . . . .
BUFFALO TRANSITION (BUF.SPICA2):From over BUF VOR/DME via BUF R-267 to MOAWK INT, then via YQO R-094 to YQO VOR/DME, then via YQO R-269 to SPICA 74 DME FIX. Thence . . . .
ERIE TRANSITION (ERI.SPICA2): From over ERI VORTAC via ERI R-309 to WOLIS INT, then via YQO R-269 to SPICA 74 DME FIX. Thence....

. . . . From over SPICA 74 DME FIX:
Landing Runway 21L/R or 22L/R via DXO R-070 to VERNR 26 DME FIX. Thence . . . .
Landing Runway 3L/R or 4L/R via DXO R-070 to WITKR 10 DME FIX. Thence . . . .
. . . . Expect radar vectors to final approach course.

ST. CLAIR THREE DEPARTURE

ATIS 133.675
CLNC DEL
120.65
GND CON
EAST 119.45
WEST 121.8
METRO TOWER
EAST 118.4 287.1
WEST 135.0 287.1



NOTE: Chart not to scale.

NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: JETS ONLY.

TAKE-OFF MINIMUMS:
All Rwys: STANDARD.

TAKE-OFF OBSTACLES:
Rwy 3R: Headwall 399′ from DER, 566′ right of centerline, 17′ AGL/647′ MSL.
Rwy 4L: Multiple Trmsn towers 1516′ from DER, 827′ left of centerline, up to 60′ AGL/690′ MSL.
Multiple Antennas 2751′ from DER, 762′ right of centerline, up to 84′ AGL/714′ MSL.
Rwy 4R: Antenna on Bldg 3348′ from DER, 1301′ left of centerline, 100′ AGL/736′ MSL.
Rwy 9L: Multiple Trees 968′ to 2519′ from DER, 462′ left of centerline and 1173′ right of centerline, up to 85′ AGL/715′ MSL.
Rwy 9R: Tree 1837′ from DER, 947′ right of centerline, 50′ AGL/686′ MSL.
Rwy 21L: Multiple Trees 1079′ to 3910′ from DER, 586′ left of centerline and 1188′ right of centerline, up to 100′ AGL/733′ MSL.
Rwy 22L: Multiple Trees 794′ to 3694′ from DER, 611′ right of centerline and 1381′ left of centerline, up to 110′ AGL/740′ MSL.
Rwy 27R: Rod on ASR 4461′ from DER, 464′ left of centerline, 106′ AGL/756′ MSL.

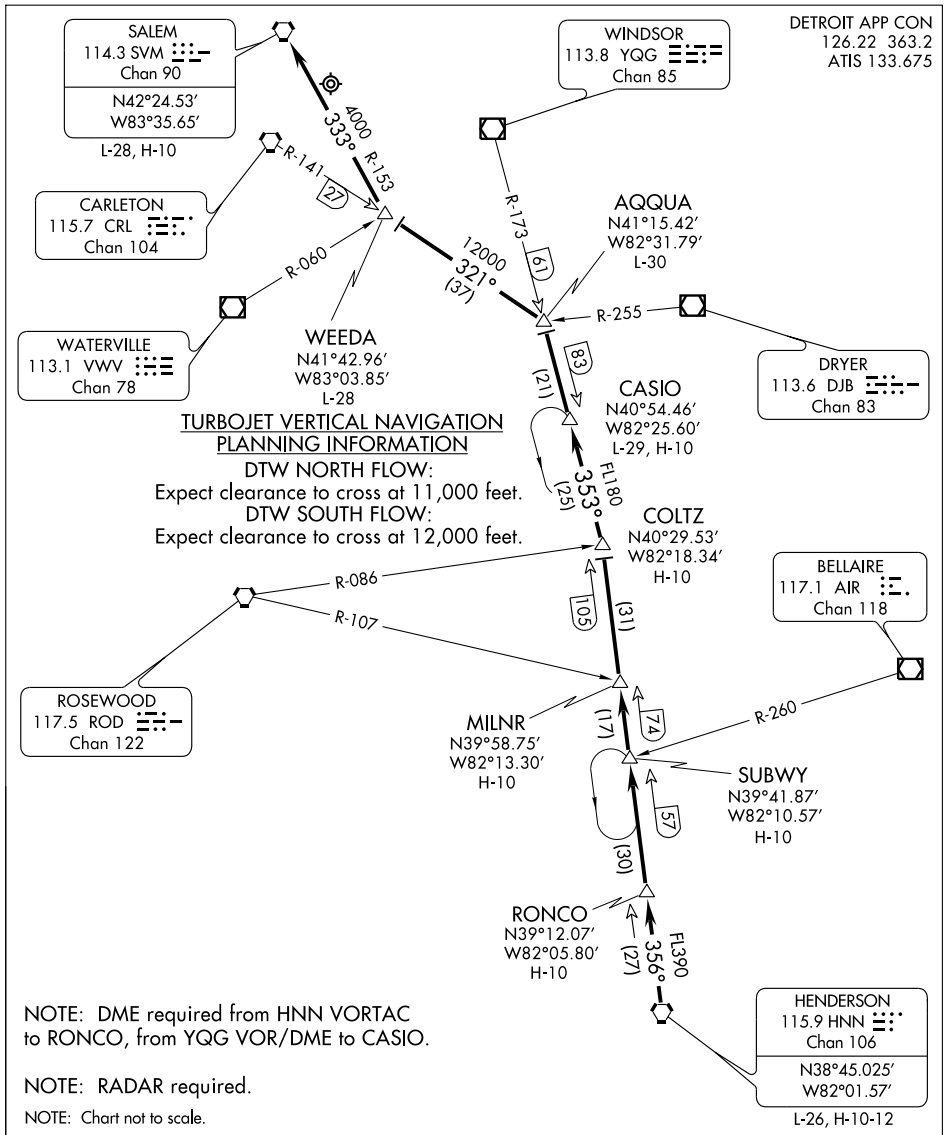
SPECIAL INSTRUCTIONS: When using this departure file appropriate fix and route.
Jets use Departure Control Frequency 132.025.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned airway or radial then proceed to the assigned departure fix, thence via the assigned route. Jets maintain 10,000 feet. Cross DXO 10 DME Arc at or above 5,000 feet for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level 10 minutes after departure.

WEEDA ONE ARRIVAL

ST-119 (FAA)



ARRIVAL ROUTE DESCRIPTION

From over HNN VORTAC via R-356 to COLTZ INT (MEA FL390), then via YQG R-173 to AQQUA INT (MEA FL180), then via CRL R-141 TO WEEDA INT (MEA 12000) then via SVM R-153 TO SVM VORTAC (MEA 4000). Expect radar vectors to final approach course.

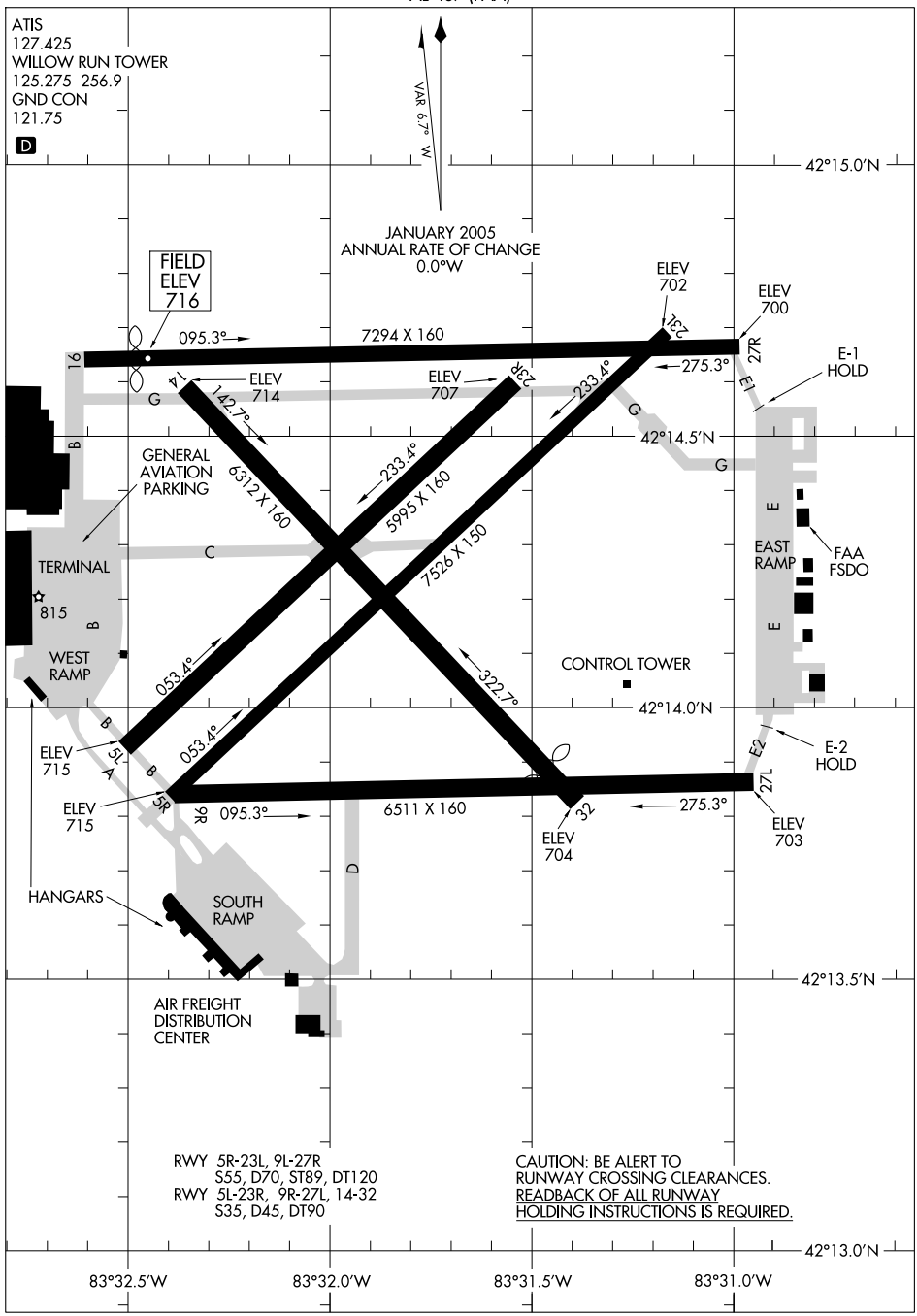
EC-1, 14 JAN 2010 to 11 FEB 2010

09295

AIRPORT DIAGRAM

DETROIT/ WILLOW RUN (YIP)
DETROIT, MICHIGAN

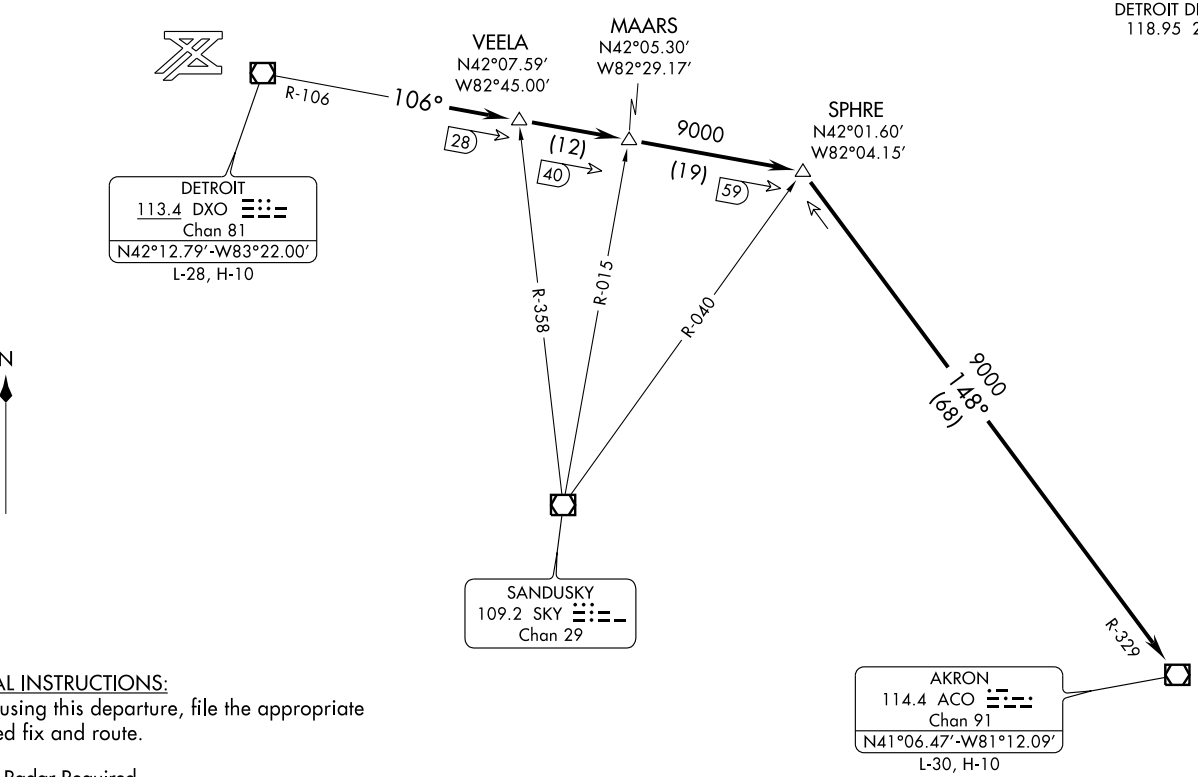
AL-467 (FAA)



EC-1, 14 JAN 2010 to 11 FEB 2010

TAKE-OFF MINIMUMS
Rwys 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

(ACO2.ACO) 08101
AKRON TWO DEPARTURE
SL-467 (FAA)
DETROIT/ WILLOW RUN (YIP)
DETROIT, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 5L: Multiple Trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.

Rwy 5R: Multiple Trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.

Rwy 9R: Multiple Trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.

Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL.
Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.

Rwy 23R: Multiple trees and road with vehicle beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.

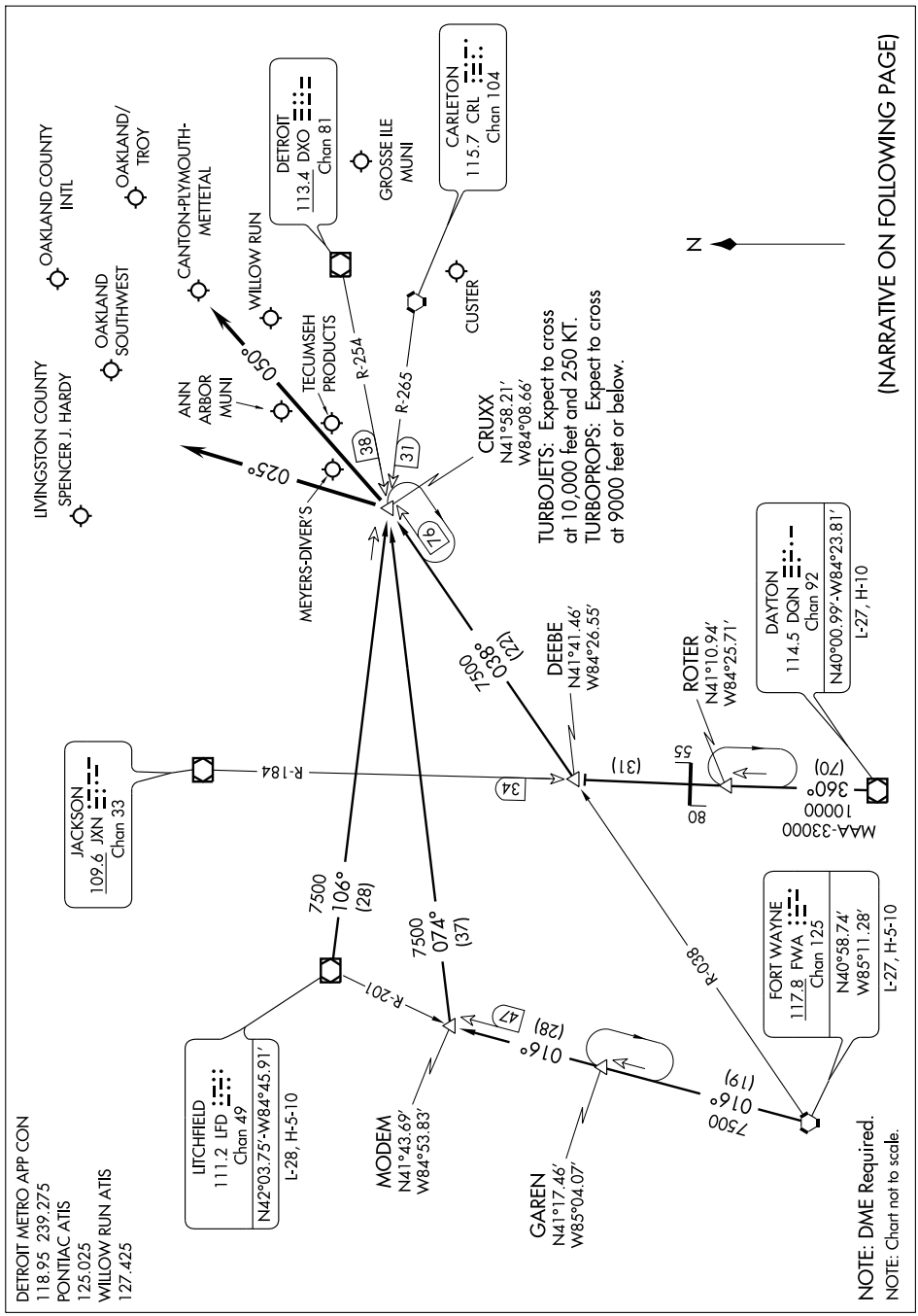
Rwy 27L: Multiple Trees and Pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.

Rwy 27R: Railroad and Lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL.
Tree and Lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL.
Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.

Rwy 32: Multiple Trees and Poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL.
Multiple Trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

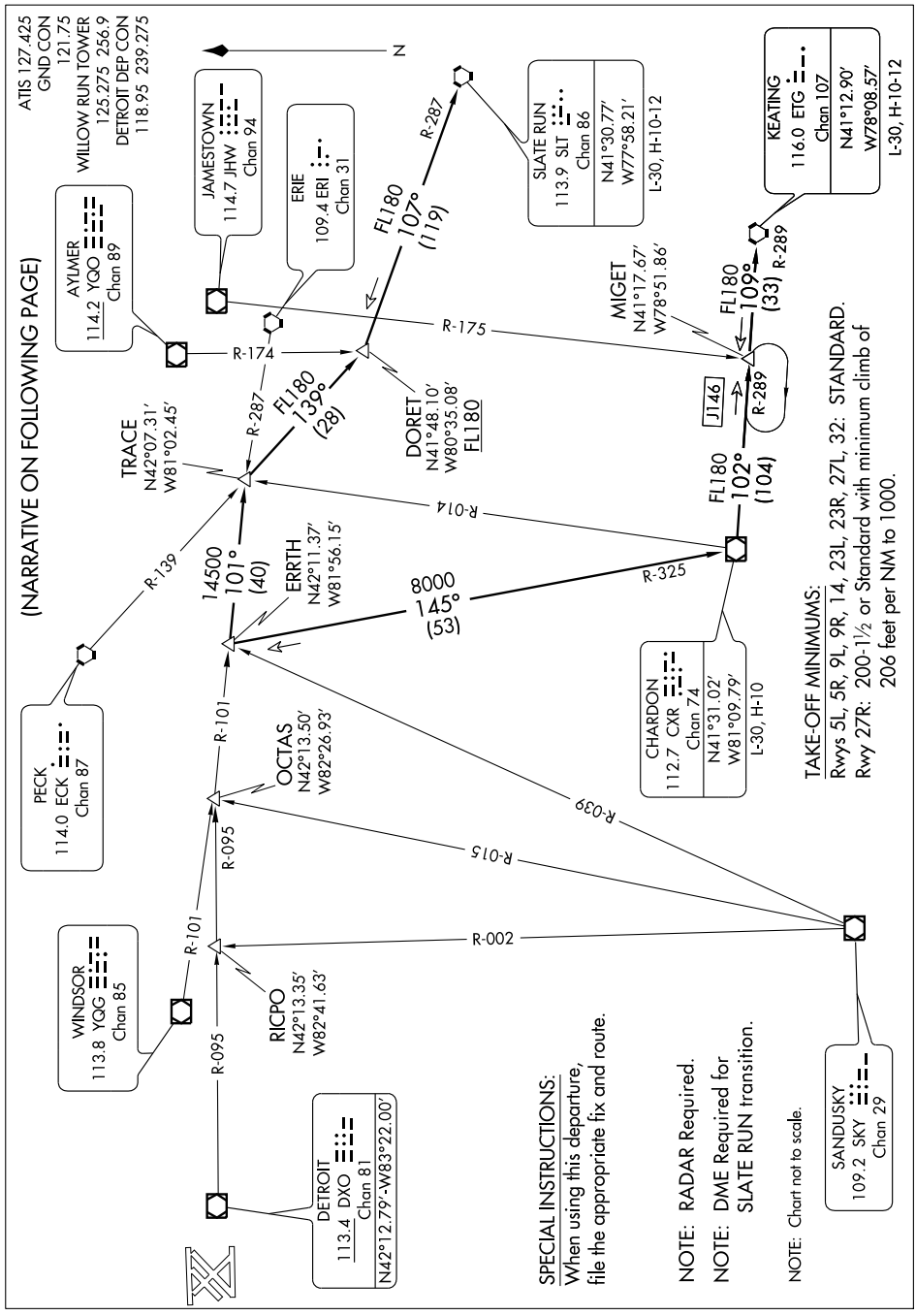
. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

ERRTH TWO DEPARTURE

SL-467 (FAA)

DETROIT/WILLOW RUN (YIP)
DETROIT, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.
KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.
SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

TAKE-OFF OBSTACLES:

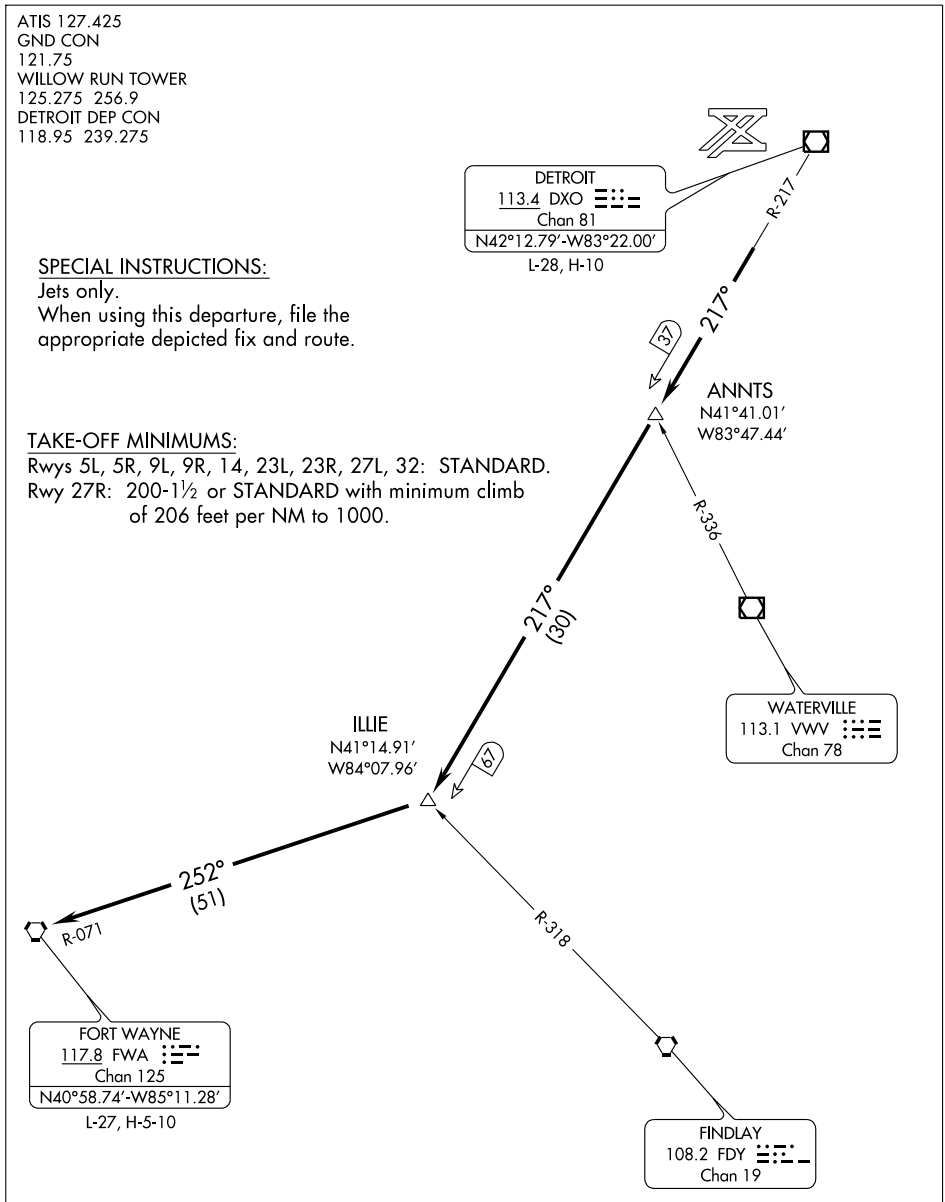
Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.
Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.
Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.
Rwy 23L Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL. Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.
Rwy 23R: Multiple trees and road with vehicle beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.
Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.
Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL. Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL. Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.
Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL. Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

FORT WAYNE THREE DEPARTURE

SL-467 (FAA)

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwys 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to **ILLIE INT**, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.

Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.

Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.

Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL.
Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.

Rwy 23R: Multiple trees and road beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.

Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.

Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL.
Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL.
Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.

Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL.
Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

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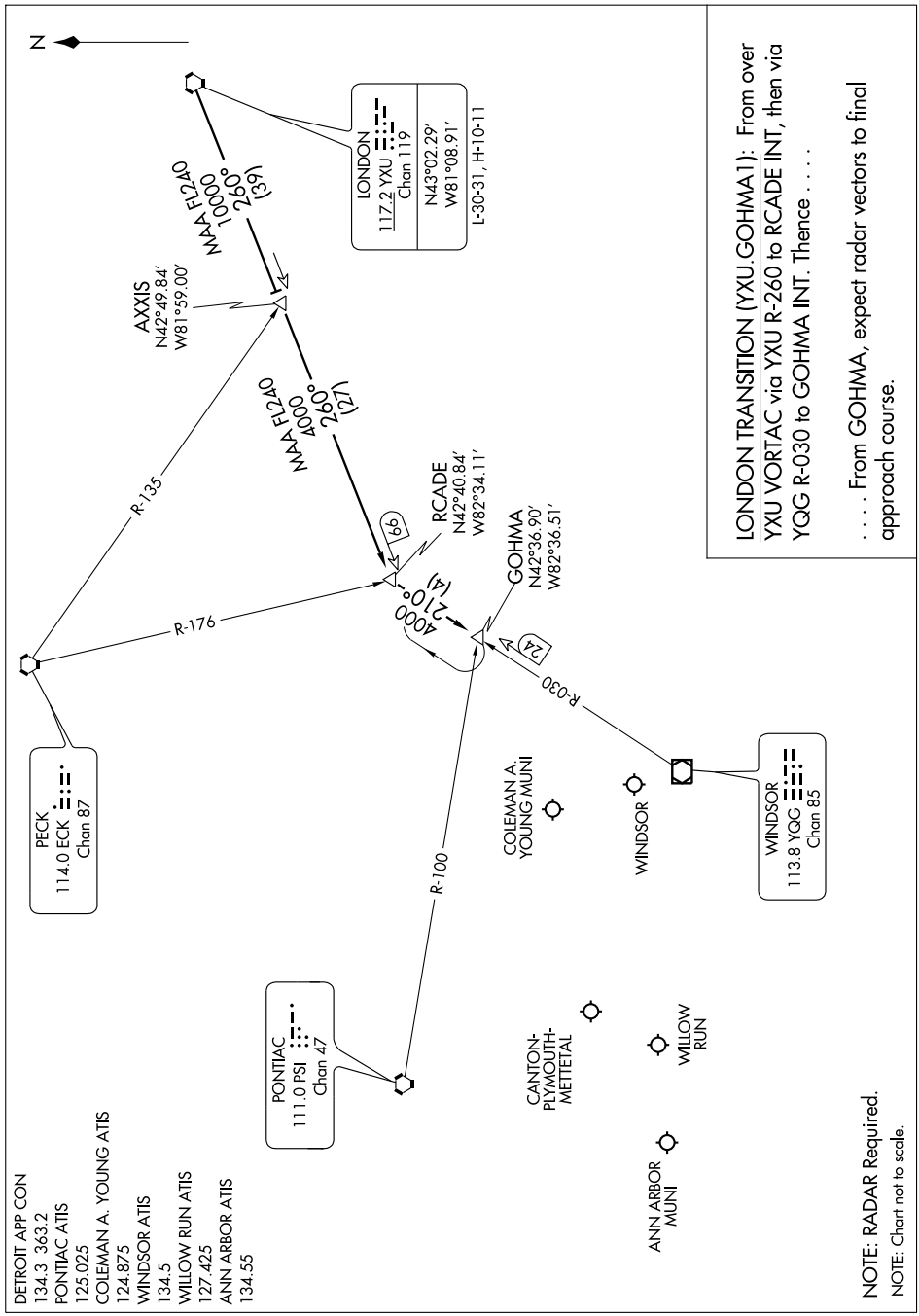
GOHMA ONE ARRIVAL

DETROIT, MICHIGAN



LOC/DME I-YIP	APP CRS		5R	5L
109.5	053°	Rwy ldg	7526	5995
Chan 32		TDZE	715	716
		Apt Elev	716	716

ILS or LOC RWY 5R

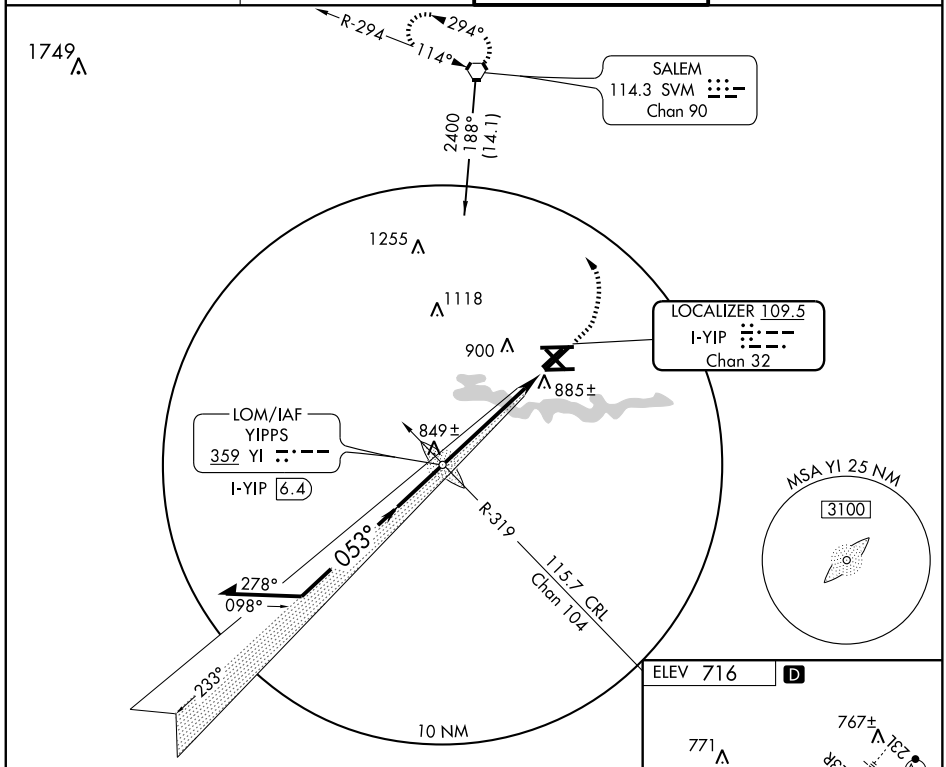
DETROIT/ WILLOW RUN (YIP)

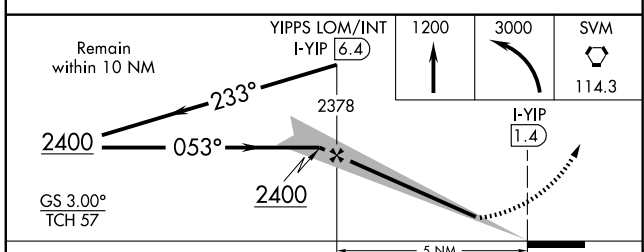
For inoperative MALSR increase S-LOC-5R Cat A and B; visibility to RVR 5000.
Inoperative table does not apply to S-ILS all cats.

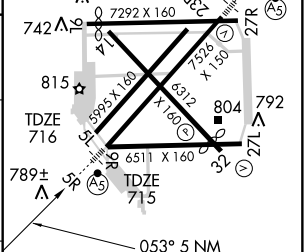
MALSR A5

MISSED APPROACH: Climb to 1200, then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

CATEGORY	A	B	C	D
S-ILS 5R	965/40 250 (300-¾)			
S-LOC 5R	1120/40 405 (500-¾)			
CIRCLING	1200-1 484 (500-1)		1200 -1½ 484 (500-1½)	1280-2 564 (600-2)
SIDESTEP RWY 5L	1120-1 404 (500-1)		1120-1½ 404 (500-1½)	1120-2 404 (500-2)

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

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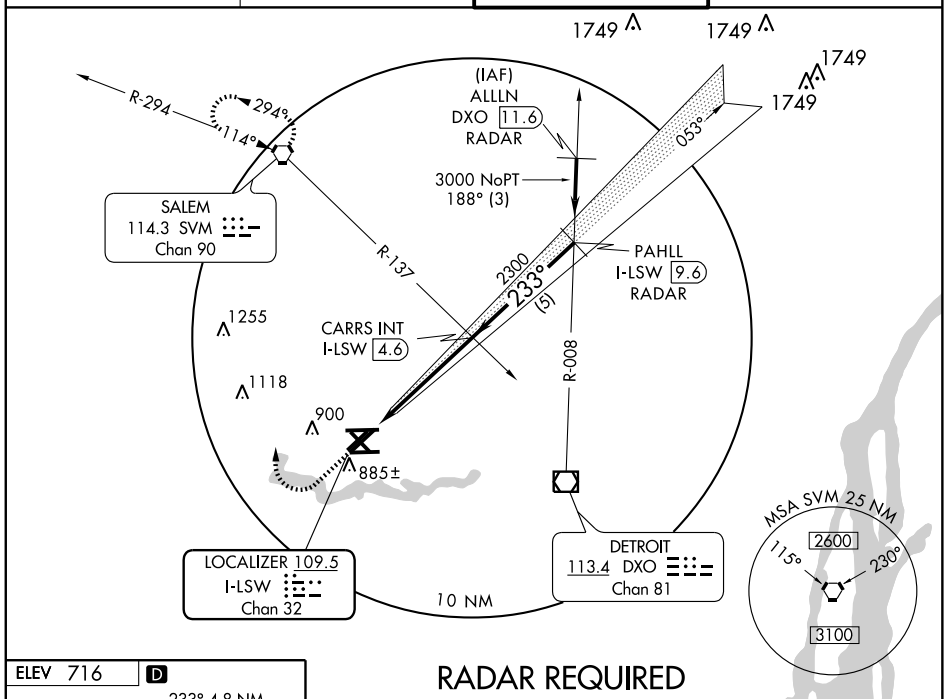
LOC/DME I-LSW	APP CRS	Rwy ldg	7526
109.5	233°	TDZE	708
Chan 32		Apt Elev	716

ILS RWY 23L
DETROIT/ WILLOW RUN (YIP)

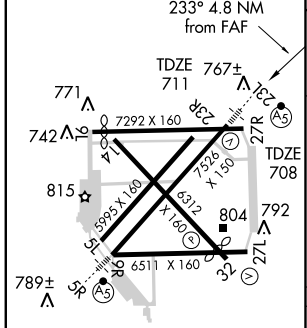
MALSR

MISSED APPROACH: Climb to 1400, then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75



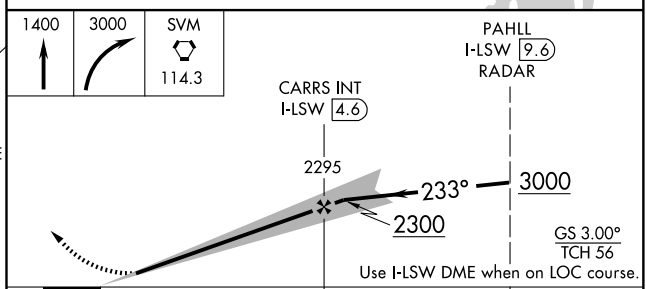
ELEV 716 D



HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

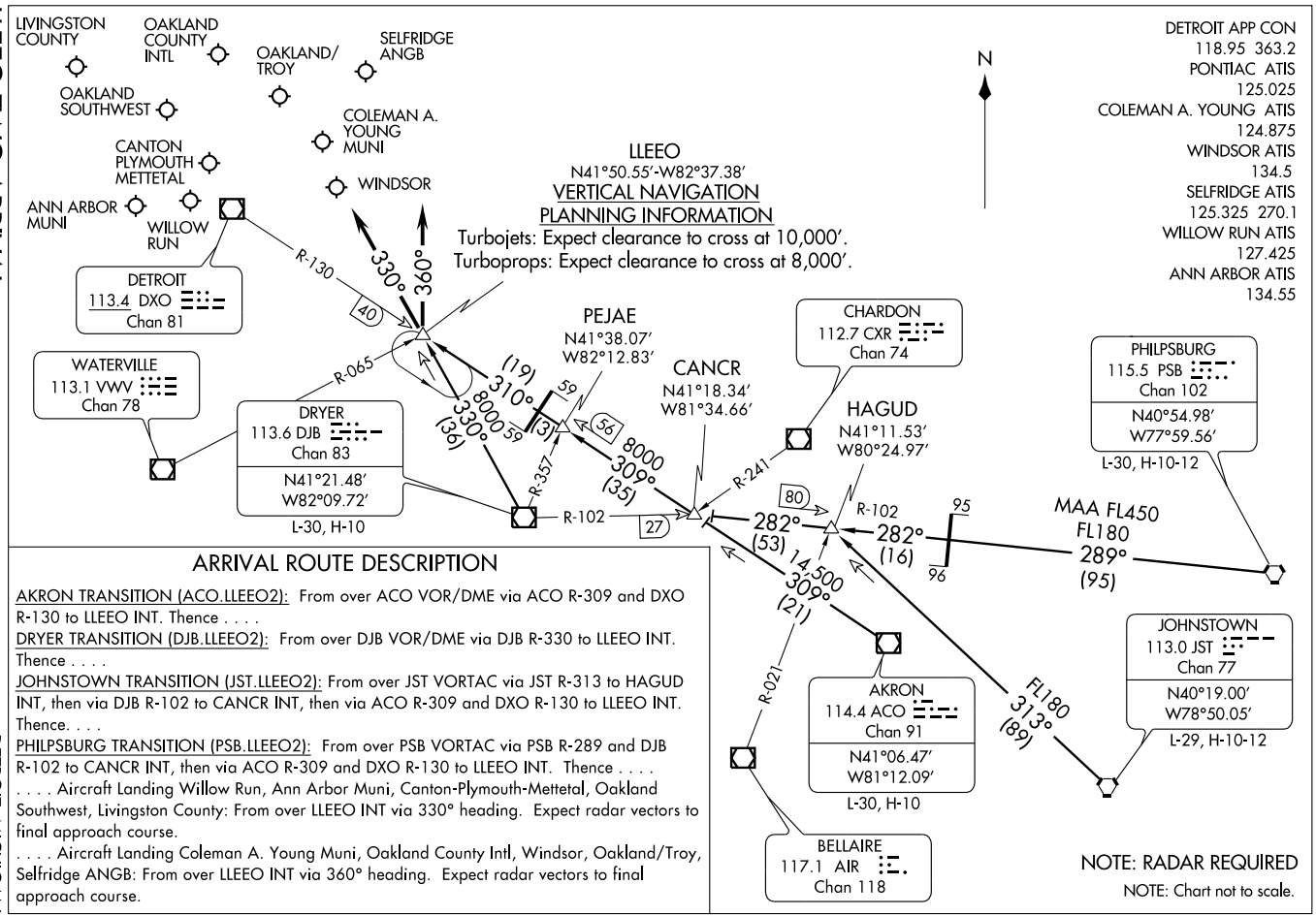
RADAR REQUIRED



CATEGORY	A	B	C	D
S-ILS 23L	908-½ 200 (200-½)			
S-LOC 23L	1140-½ 432 (500-½)		1140-¾ 432(500-¾)	1140-1 432 (500-1)
SIDESTEP RWY 23R	1140-1 429 (500-1)		1140-1½ 429 (500-1½)	1140-2 429 (500-2)
CIRCLING	1200-1 484 (500-1)		1200-1½ 484 (500-1½)	1280-2 564 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

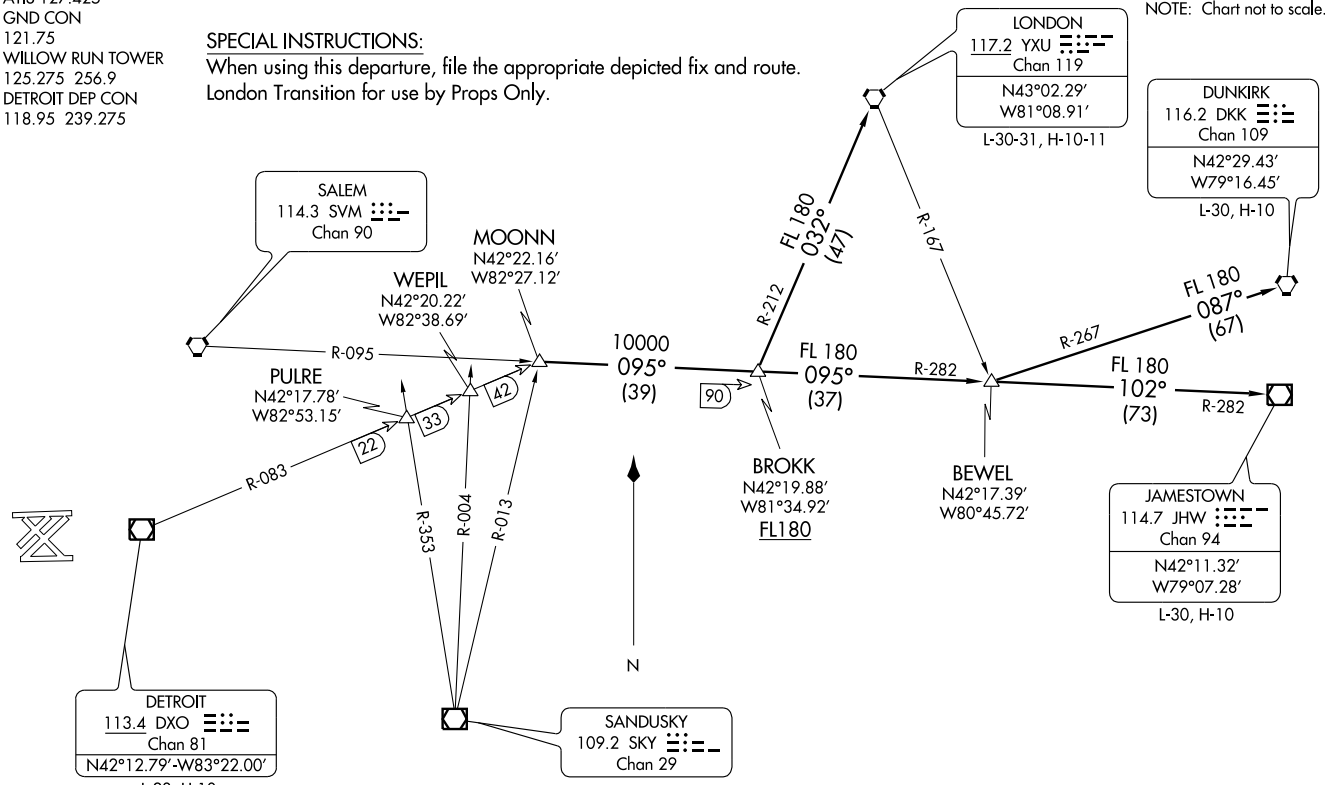
. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275

NOTE: Chart not to scale.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.
London Transition for use by Props Only.



TAKE-OFF MINIMUMS:
Rwys 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or Standard with minimum climb of 206 feet per NM to 1000.

NOTE: RADAR Required.

(NARRATIVE ON FOLLOWING PAGE)

(MOONN2.MOONN) 07354
MOONN TWO DEPARTURE
SL-467 (FAA)
DETROIT /WILLOW RUN (YIP)
DETROIT, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/ flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.
Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.
Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.
Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL.
Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.
Rwy 23R: Multiple trees and road beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.
Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.
Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL.
Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL.
Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.
Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL.
Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

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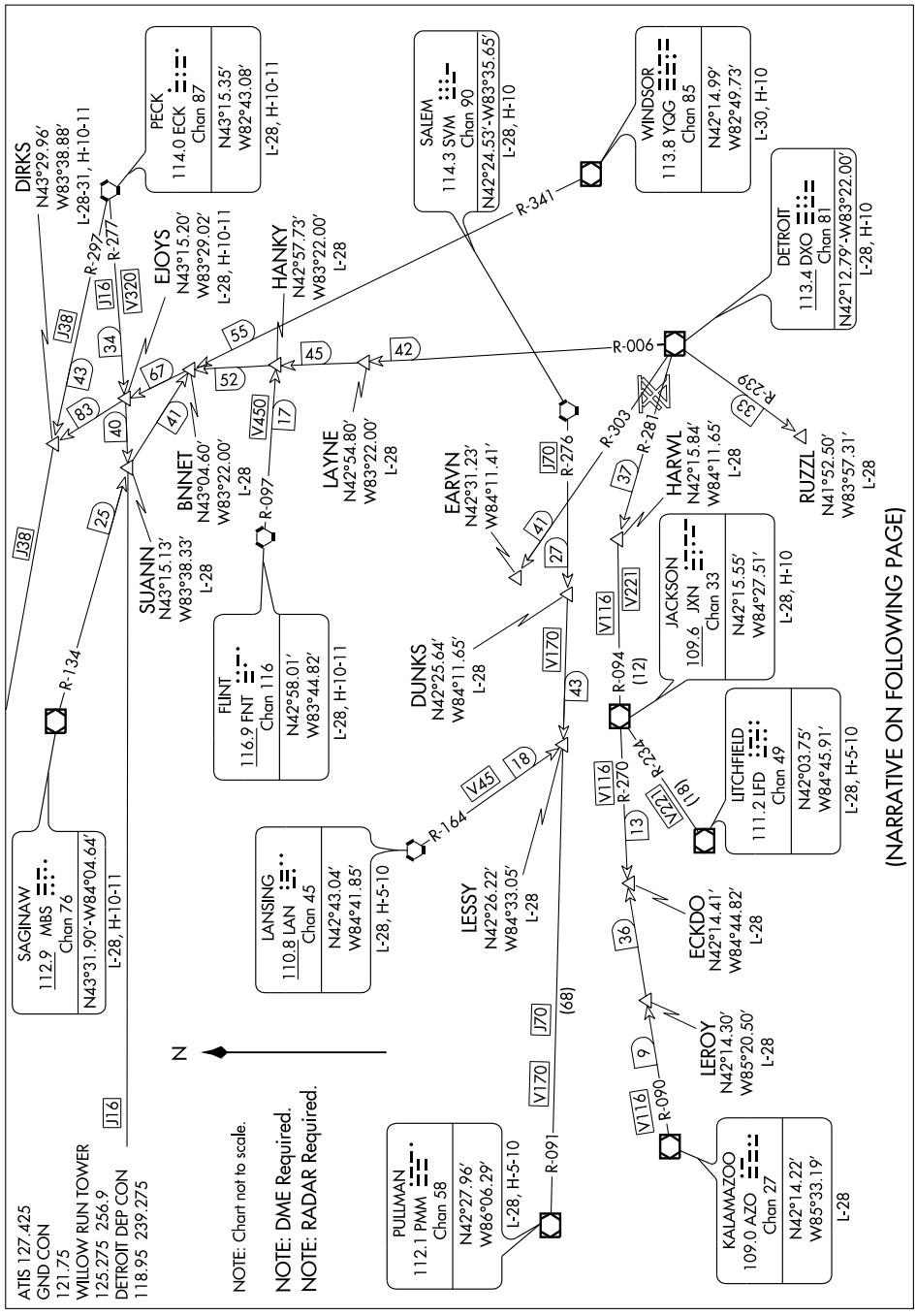
PALACE THREE DEPARTURE

SL-467 (FAA)

DETROIT /WILLOW RUN (YIP)
DETROIT, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF MINIMUMS:
Rwy 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted departure fix and route. Aircraft landing/overflying Lansing (LAN) or overflying Flint (FNT) at 10,000 feet or below, file via EARVN. Aircraft landing Flint (FNT) at 10,000 feet or below, file via LAYNE. Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL. Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:

Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.

Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.

Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.

Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL. Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.

Rwy 23R: Multiple trees and road with vehicle beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.

Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.

Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL. Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL. Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.

Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL. Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

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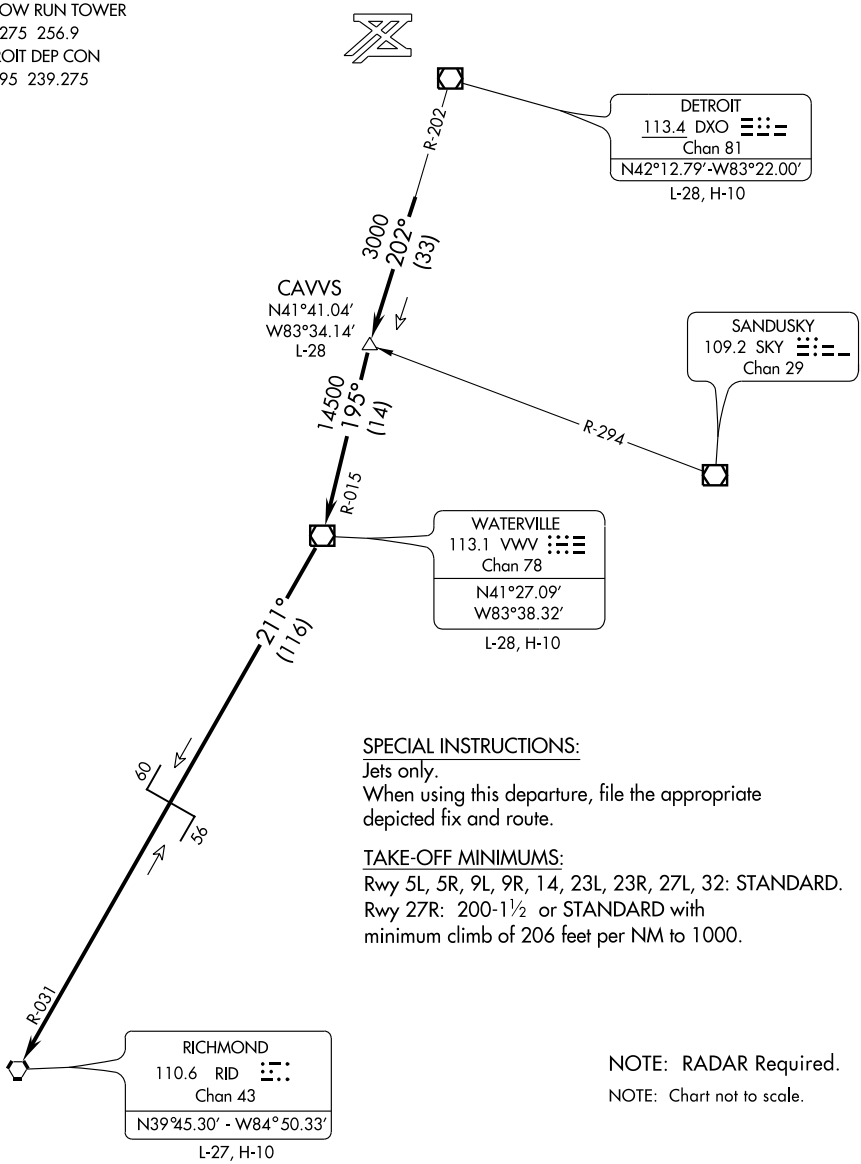
RICHMOND FOUR DEPARTURE SL-467 (FAA)

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275



SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwy 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.

Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.

Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.

Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL.
Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.

Rwy 23R: Multiple trees and road beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.

Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.

Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL.
Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL.
Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.

Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL.
Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

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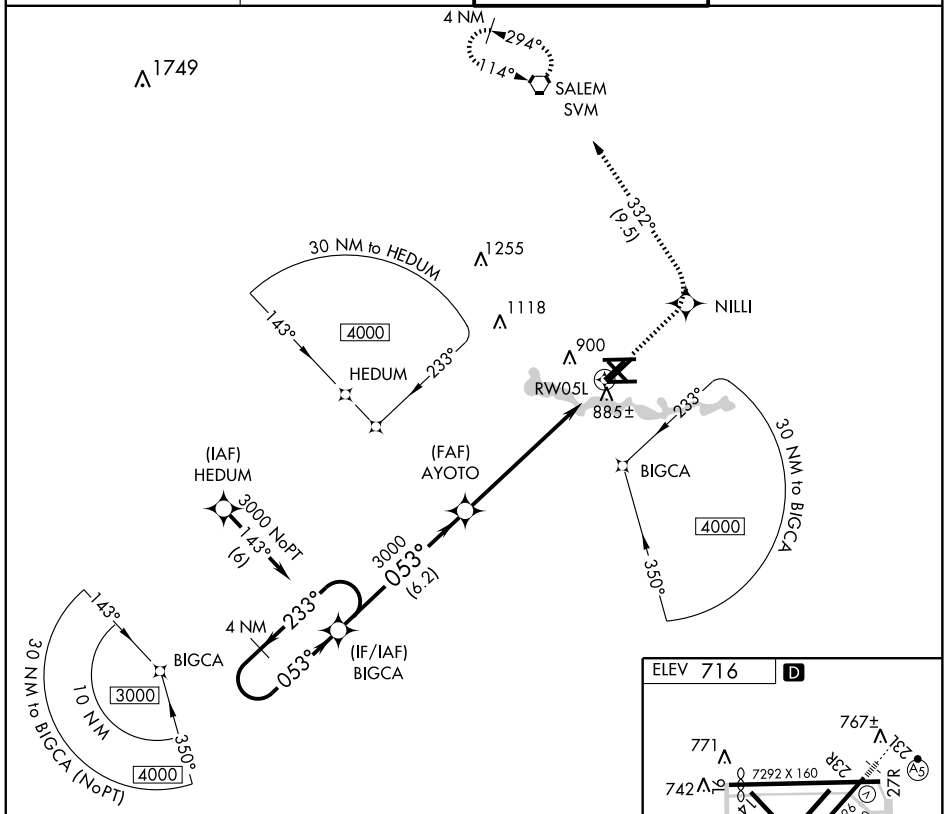
APP CRS	Rwy ldg	5995
053°	TDZE	716
	Apt Elev	716

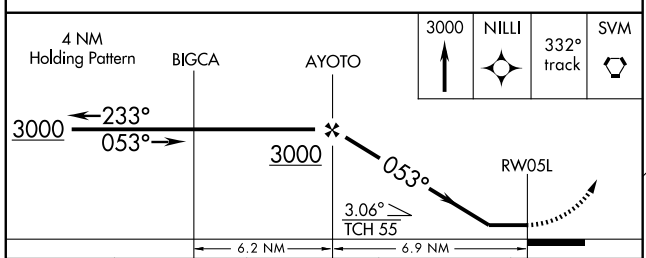
RNAV (GPS) RWY 5L
DETROIT/WILLOW RUN (YIP)

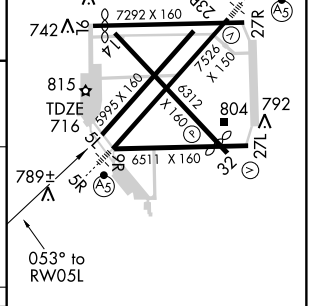
Circling NA at night to RWY 09L, 14, 23R.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
NA Straight-in/Circling NA at night to Rwy 05L.

MISSED APPROACH: Climb to 3000 direct NILLI WP and via 332° track to SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







CATEGORY	A	B	C	D
LNAV MDA	1240-1 524 (600-1)		1240-1½ 524 (600-1½)	1240-1¾ 524 (600-1¾)
CIRCLING	1240-1 524 (600-1)		1240-1½ 524 (600-1½)	1280-2 564 (600-2)

HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	7526
053°	TDZE	715
	Apt Elev	716

RNAV (GPS) RWY 5R
DETROIT/ WILLOW RUN (YIP)

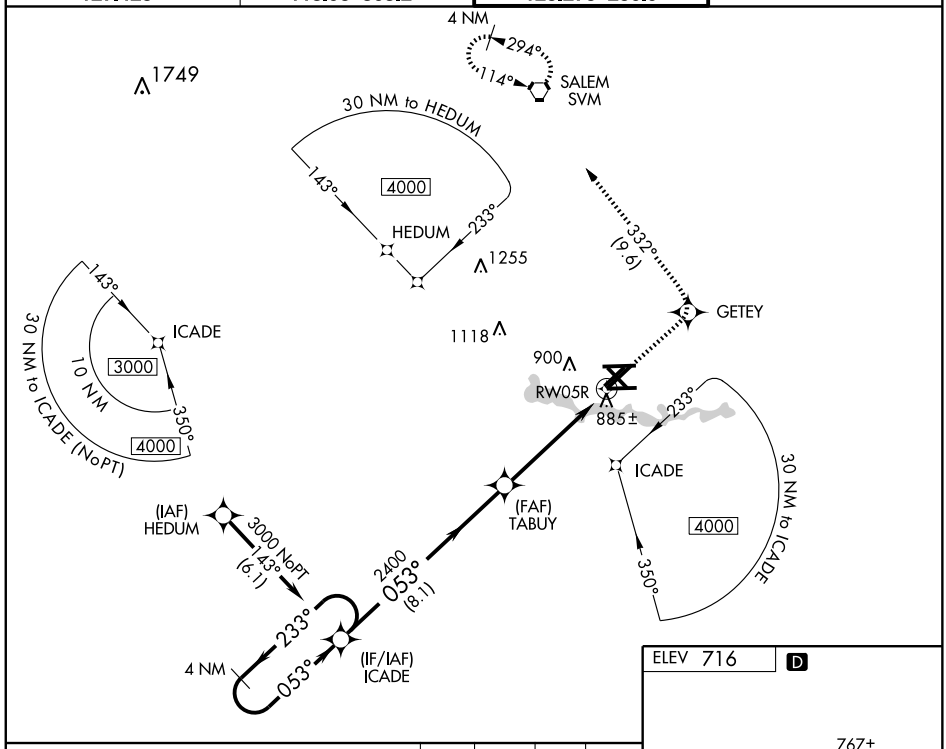
Circling NA at night to Rwy 5L, 9L, 14, 23R. For inoperative MALSR increase LNAV Cat A/B visibilities to RVR 5000. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. Baro-VNAV NA below -16°C (4°F)

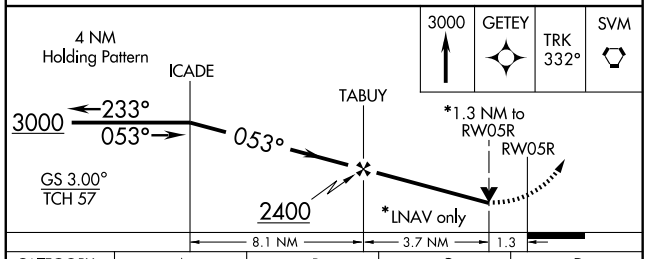
NA

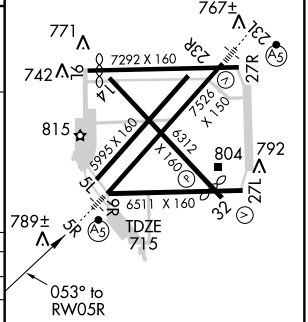
MALSR

MISSED APPROACH: Climb to 3000 direct GETEY WP and via 332° track to SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







CATEGORY	A	B	C	D
GLS DA	NA			
LNAV/VNAV DA	1200/60 485 (500-1¼)			
LNAV MDA	1200/40 485 (500-¾)			1200/50 485 (500-1)
CIRCLING	1200-1¾ 484 (500-1¾)			1280-2 564 (600-2)

HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

EC-1. 14 JAN 2010 to 11 FEB 2010

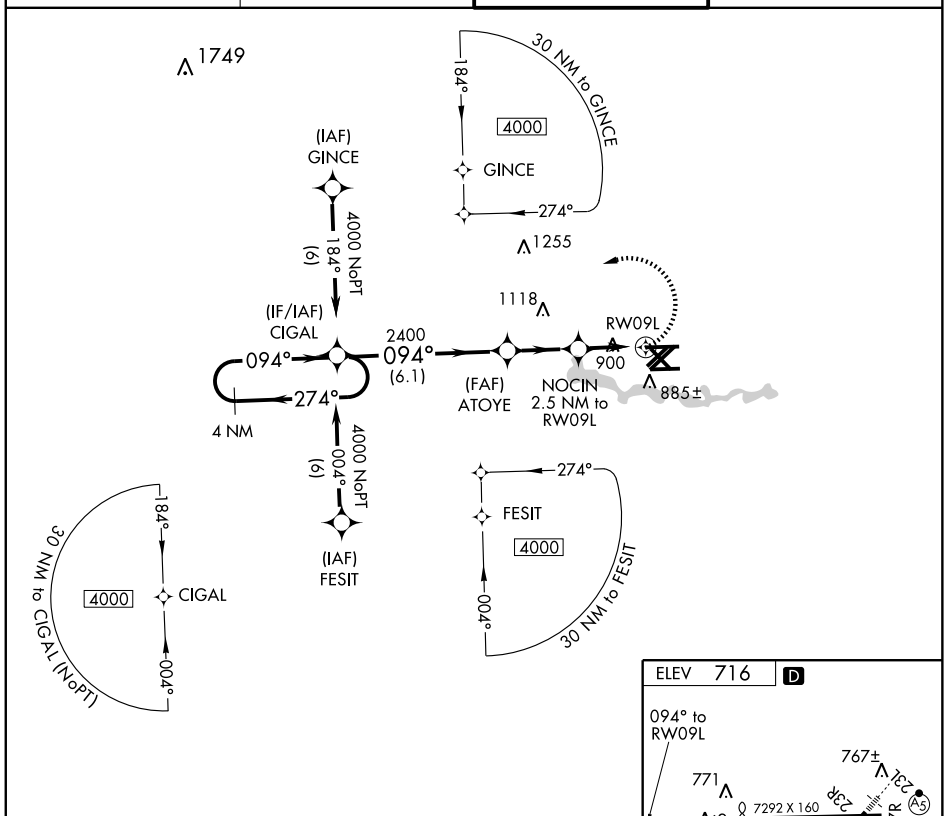
APP CRS	Rwy ldg	6718
094°	TDZE	715
	Apt Elev	716

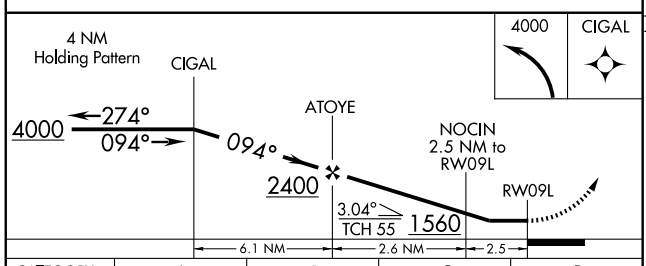
RNAV (GPS) RWY 9L
DETROIT/WILLOW RUN (YIP)

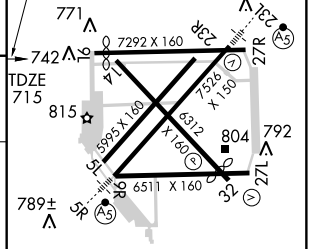
DME/DME RNP-0.3 NA.
Procedure NA at night.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing left turn to 4000 direct CIGAL and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







CATEGORY	A	B	C	D
LNAV MDA	1160-1 445 (500-1)		1160-1¼ 445 (500-1¼)	1160-1½ 445 (500-1½)
CIRCLING	1200-1 484 (500-1)		1200-1½ 484 (500-1½)	1280-2 564 (600-2)

HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

EC-1. 14 JAN 2010 to 11 FEB 2010

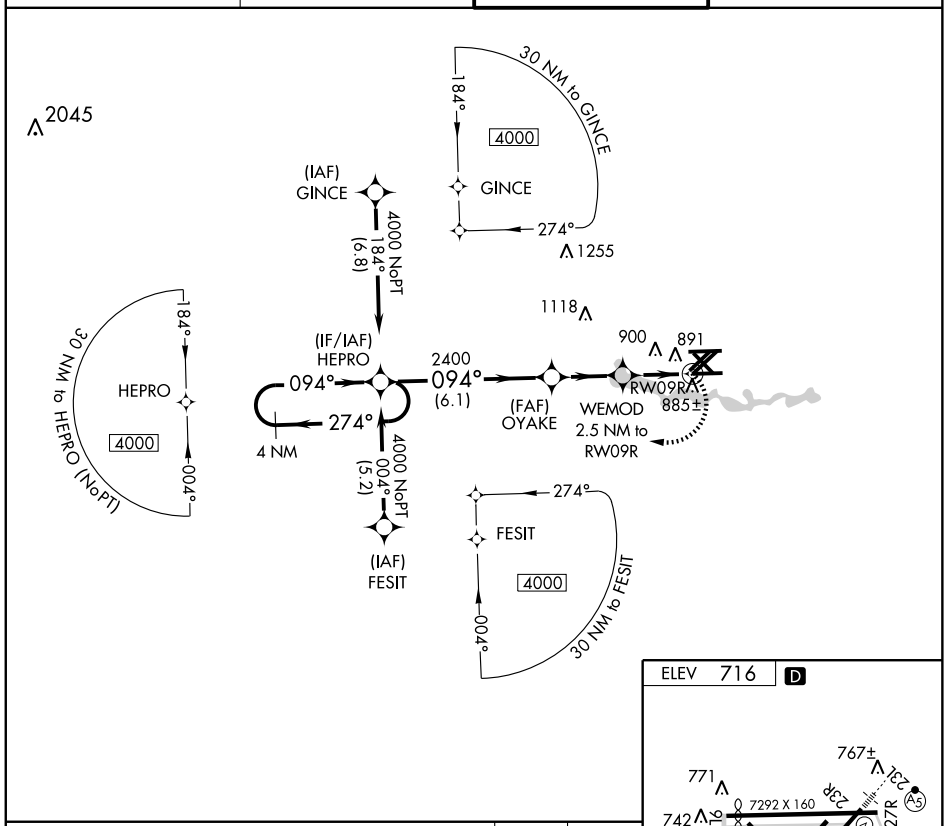
APP CRS	Rwy ldg	6511
094°	TDZE	715
	Apt Elev	716

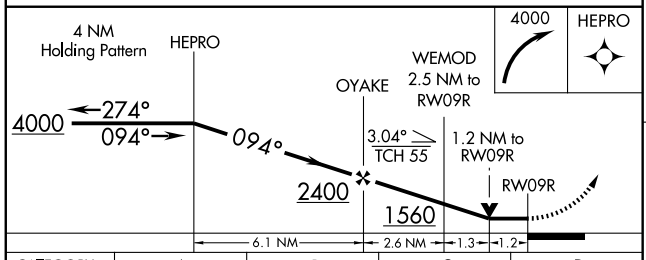
RNAV (GPS) RWY 9R
DETROIT/WILLOW RUN (YIP)

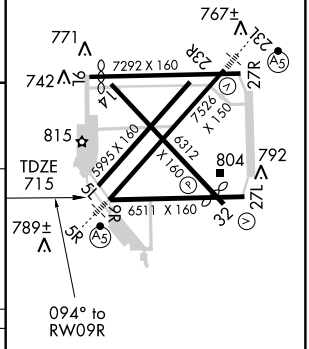
Circling to Rwy 5L, 9L, 14, 23R NA at night.
DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing right turn to 4000 direct HEPRO and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

CATEGORY	A	B	C	D
LNAV MDA	1160-1 445 (500-1)		1160-1¼ 445 (500-1¼)	1160-1½ 445 (500-1½)
CIRCLING	1200-1 484 (500-1)		1200-1½ 484 (500-1½)	1280-2 564 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

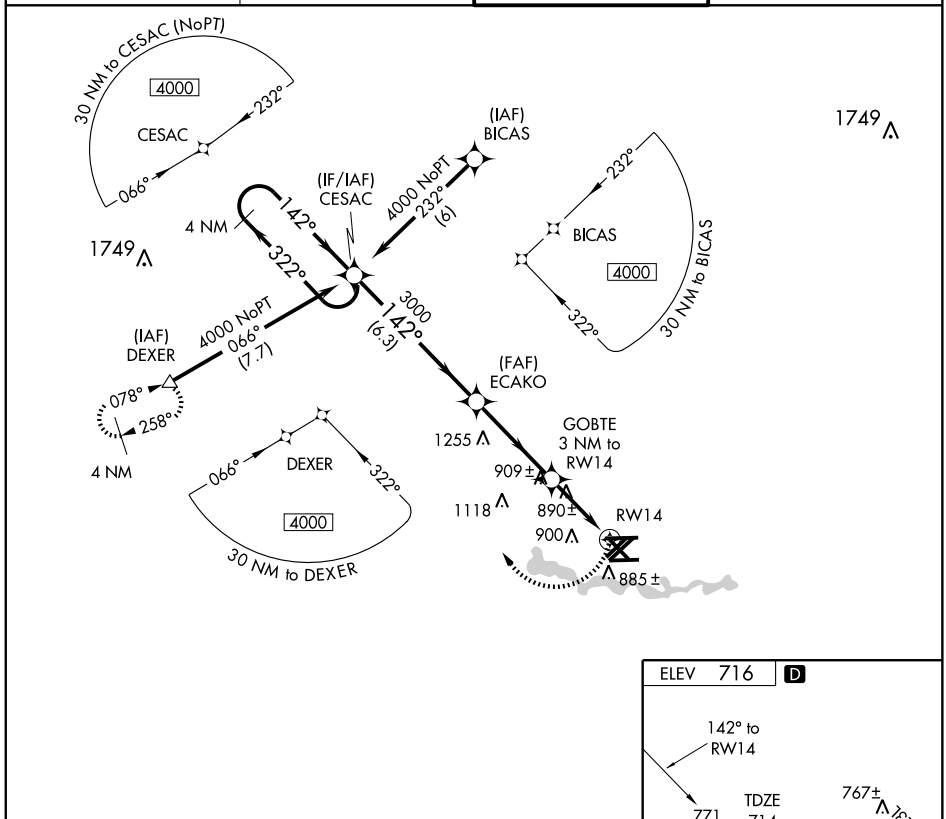
APP CRS	Rwy ldg	6312
142°	TDZE	714
	Apt Elev	716

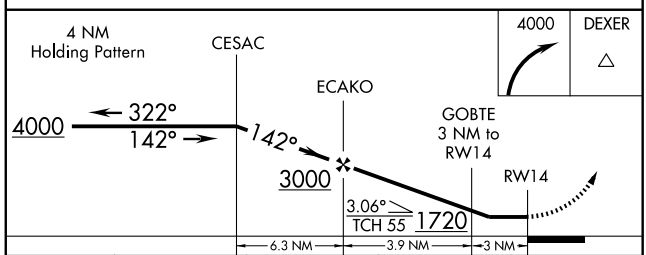
RNAV (GPS) RWY 14
DETROIT/ WILLOW RUN (YIP)

DME/DME RNP-0.3 NA.
Procedure NA at night.
Visibility reduction by helicopters NA.

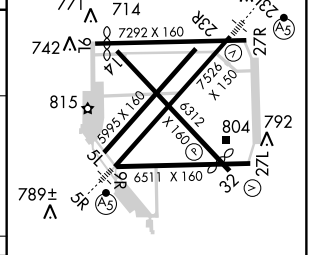
MISSED APPROACH: Climbing right turn to 4000 direct DEXER and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75





CATEGORY	A	B	C	D
LNAV MDA	1140-1	426 (500-1)	1140-1¼	426 (500-1¼)
CIRCLING	1200-1	484 (500-1)	1200-1½ 484 (500-1½)	1280-2 564 (600-2)



HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 81910 W23A	APP CRS 233°	Rwy ldg 7526	TDZE 708	Apt Elev 716

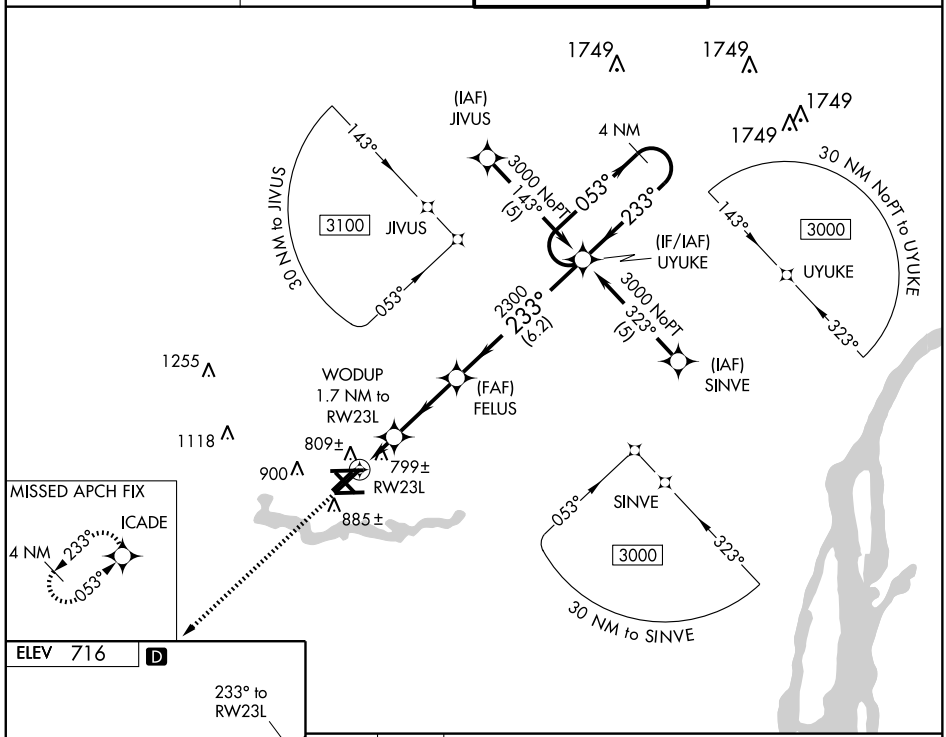
RNAV (GPS) RWY 23L
DETROIT/ WILLOW RUN (YIP)

Circling to Rwy 5L, 9L, 14, 23R NA at night.
For inoperative MALSR, increase LNAV Cats. A, B, & C visibility to 1 mile, Cat. D to 1¼ miles. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

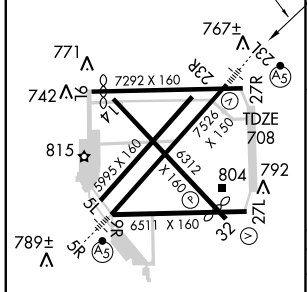
MALSR

MISSED APPROACH: Climb to 3000 direct ICADE and hold.

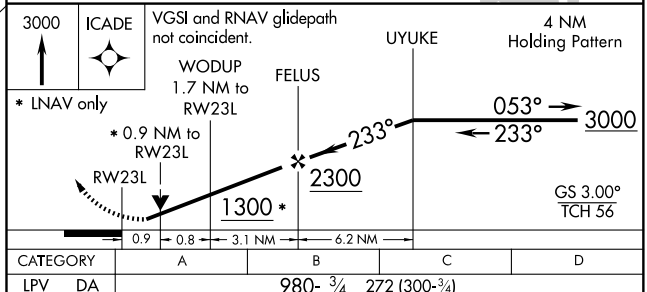
ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75



ELEV 716 D



HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R



CATEGORY	A	B	C	D
LPV DA	980- ¾ 272 (300-¾)			
LNAV/VNAV DA	1096- ¾ 388 (400-¾)			
LNAV MDA	1060- ¾ 352 (400-¾)			1060-1 352 (400-1)
CIRCLING	1200-1 484 (500-1)		1200-1½ 484 (500-1½)	1280-2 564 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

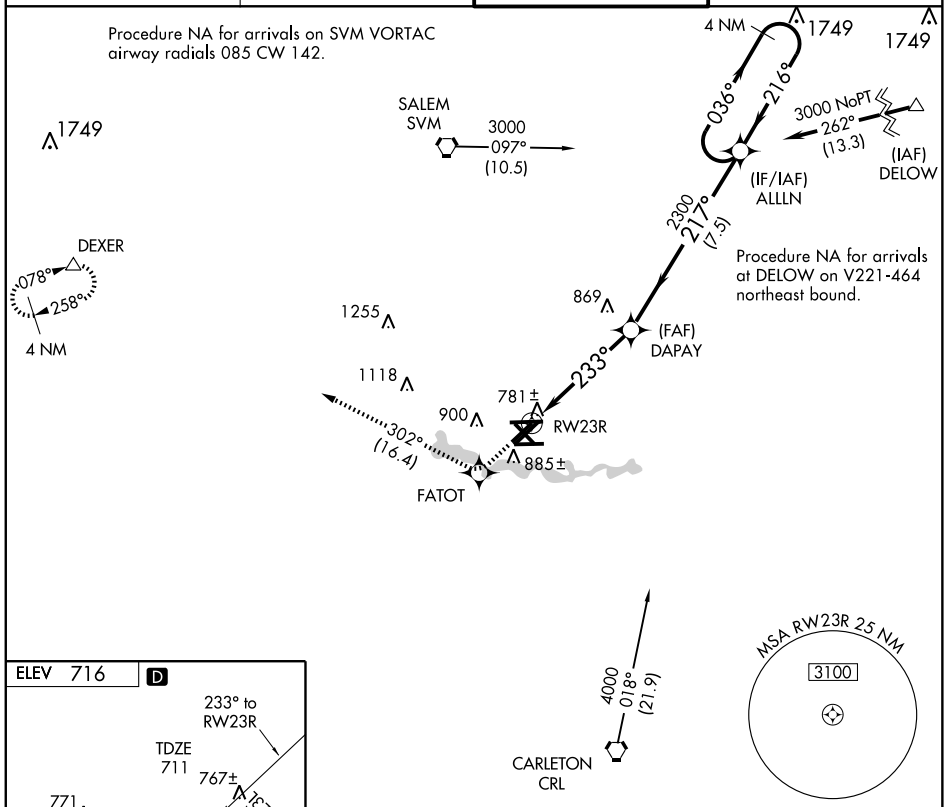
APP CRS	Rwy ldg	5995
233°	TDZE	711
	Apt Elev	716

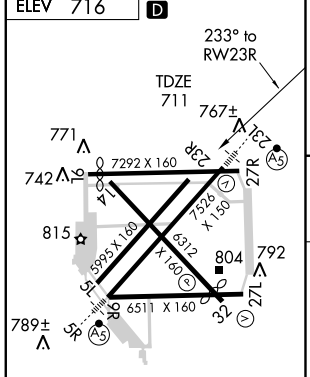
RNAV (GPS) RWY 23R
DETROIT/ WILLOW RUN (YIP)

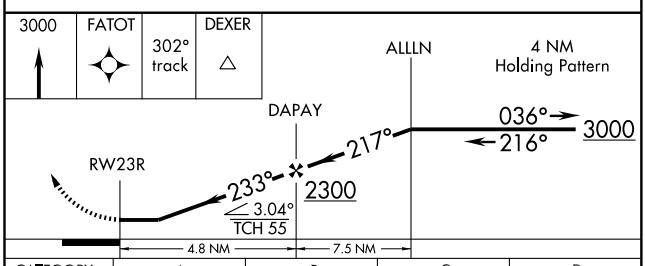
DME/DME RNP-0.3 NA.
Straight-in/Circling to Rwy 23R NA at night.
Circling NA at night to Rwy 5L, 9L, 14.
NA

MISSED APPROACH: Climb to 3000 direct FATOT WP and via 302° track to DEXER WP and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

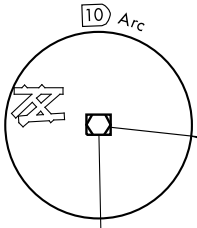
CATEGORY	A	B	C	D
LNAV MDA	1120 - 1	409 (500-1)	1120-1¼	409 (500-1¼)
CIRCLING	1200 - 1	484 (500-1)	1200 - 1½ 484 (500-1½)	1280 - 2 564 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

ROSEWOOD TWO DEPARTURE SL-467 (FAA)

(NARRATIVE ON FOLLOWING PAGE)

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275



DETROIT
113.4 DXO
Chan 81
N42°12.79′-W83°22.00′
L-28, H-10

R-184

32

SCORR
N41°40.31′
W83°20.49′

41

CHOOT
N41°31.54′
W83°20.09′

SANDUSKY
109.2 SKY
Chan 29

R-299

R-284

39

18

R-031

FINDLAY
108.2 FDY
Chan 19

R-028

SPECIAL INSTRUCTIONS:
When using this departure file appropriate fix and route.

TAKE-OFF MINIMUMS:
Rwys 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.
Rwy 27R: 200-1½ or Standard with minimum climb of 206 feet per NM to 1000.

ROSEWOOD
117.5 ROD
Chan 122
N40°17.27′
W84°02.59′
L-27, H-10

NOTE: Chart not to scale.

NOTE: RADAR Required.

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 5L: Multiple trees beginning 1438′ to 2887′ from DER, from 119′ to 438′ left of centerline, up to 79′ AGL/785′ MSL.

Rwy 5R: Multiple trees beginning 1877′ to 2472′ from DER, from 134′ to 922′ left and right of centerline, up to 78′ AGL/777′ MSL.

Rwy 9R: Multiple trees beginning 827′ to 2598′ from DER, from 432′ to 600′ left and right of centerline, up to 77′ AGL/780′ MSL.

Rwy 23L: Tree 1304′ from DER, 438′ right of centerline, 42′ AGL/757′ MSL.
Tree 2457′ from DER, 720′ left of centerline, 66′ AGL/781′ MSL.

Rwy 23R: Multiple trees and road with vehicle beginning 587′ to 1333′ from DER, from 282′ to 814′ left and right of centerline, up to 77′ AGL/793′ MSL.

Rwy 27L: Multiple trees and pole beginning 1273′ to 2024′ from DER, from 47′ to 769′ left and right of centerline, up to 90′ AGL/805′ MSL.

Rwy 27R: Railroad and lights beginning 564′ to 1565′ from DER, from 4′ to 333′ left of centerline, up to 54′ AGL/770′ MSL.
Tree and lights beginning 102′ to 1257′ from DER, from 10′ to 485′ right of centerline, up to 55′ AGL/771′ MSL.
Tower 7161′ from DER, 502′ left of centerline, 162′ AGL/900′ MSL.

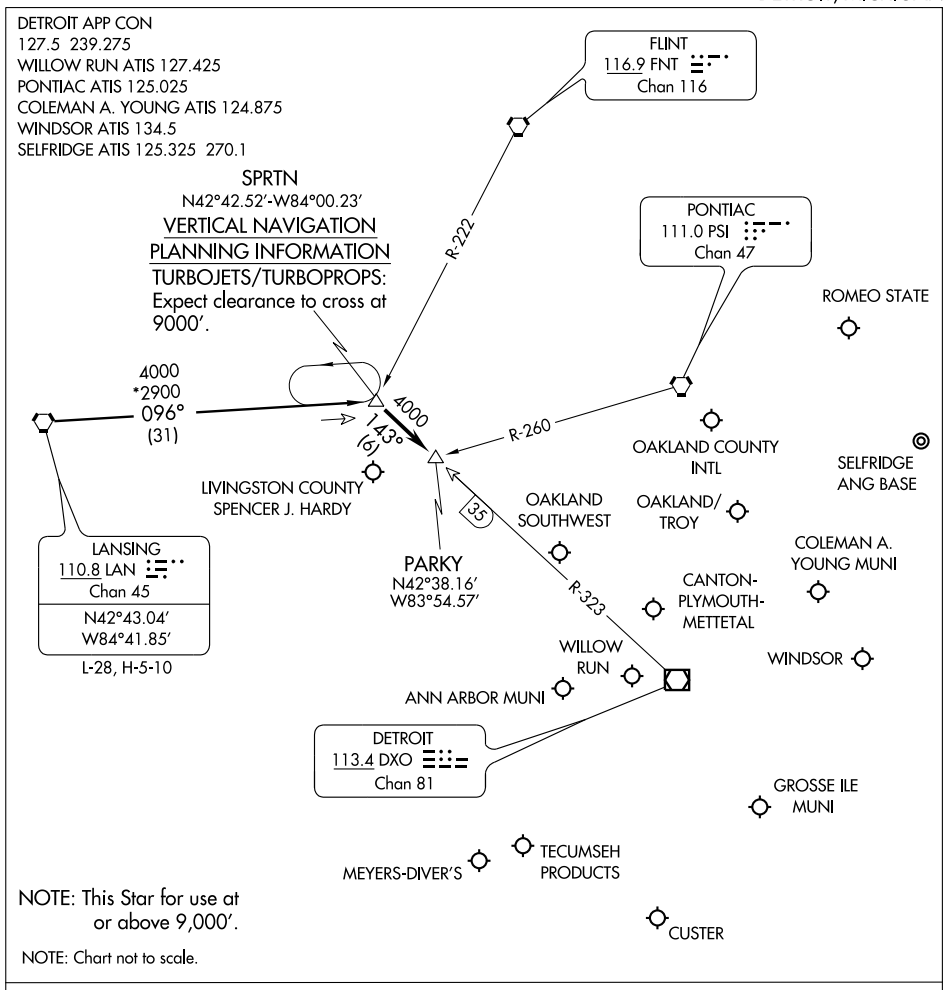
Rwy 32: Multiple trees and poles beginning 701′ to 1884′ from DER, from 78′ to 750′ left of centerline, up to 84′ AGL/798′ MSL.
Multiple trees 1157′ to 1893′ from DER, from 126′ to 475′ right of centerline, up to 66′ AGL/780′ MSL.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

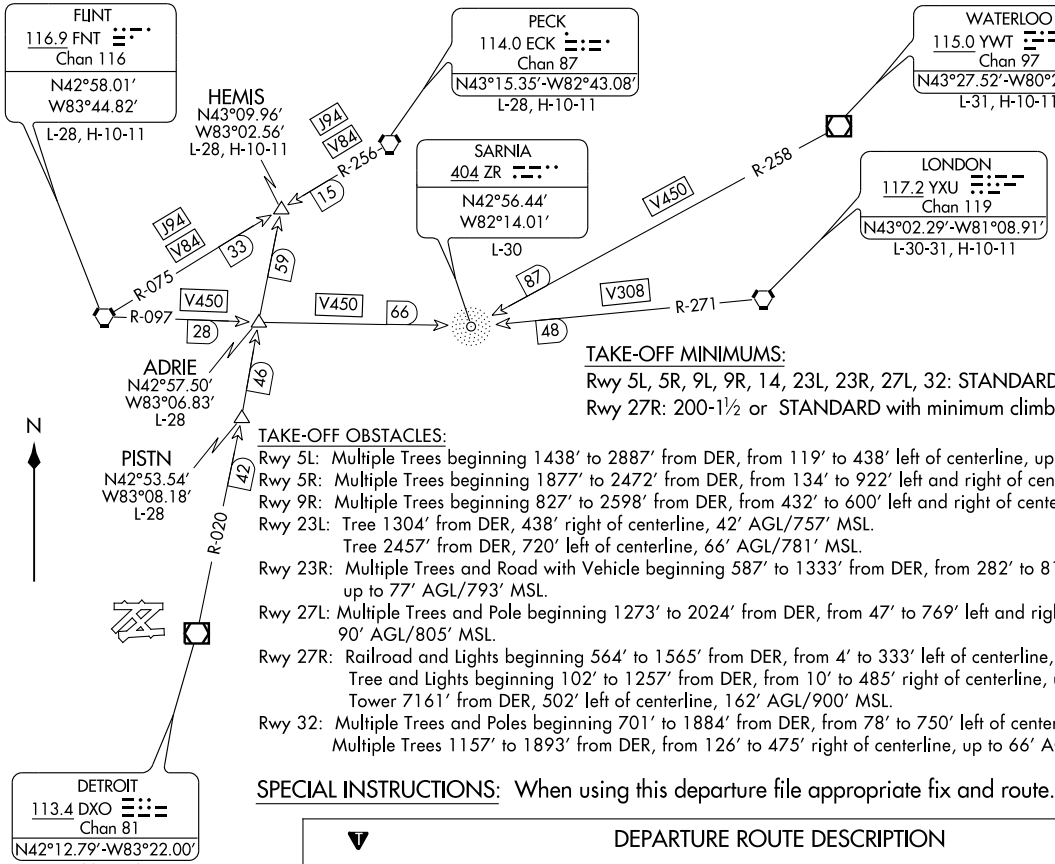
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

ST. CLAIR THREE DEPARTURE

ATIS 127.425
GND CON
121.75
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 239.275



NOTE: Chart not to scale.

NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: JETS ONLY.

TAKE-OFF MINIMUMS:

Rwy 5L, 5R, 9L, 9R, 14, 23L, 23R, 27L, 32: STANDARD.

Rwy 27R: 200-1½ or STANDARD with minimum climb of 206 feet per NM to 1000.

TAKE-OFF OBSTACLES:

Rwy 5L: Multiple Trees beginning 1438' to 2887' from DER, from 119' to 438' left of centerline, up to 79' AGL/785' MSL.

Rwy 5R: Multiple Trees beginning 1877' to 2472' from DER, from 134' to 922' left and right of centerline, up to 78' AGL/777' MSL.

Rwy 9R: Multiple Trees beginning 827' to 2598' from DER, from 432' to 600' left and right of centerline, up to 77' AGL/780' MSL.

Rwy 23L: Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL.
Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL.

Rwy 23R: Multiple Trees and Road with Vehicle beginning 587' to 1333' from DER, from 282' to 814' left and right of centerline, up to 77' AGL/793' MSL.

Rwy 27L: Multiple Trees and Pole beginning 1273' to 2024' from DER, from 47' to 769' left and right of centerline, up to 90' AGL/805' MSL.

Rwy 27R: Railroad and Lights beginning 564' to 1565' from DER, from 4' to 333' left of centerline, up to 54' AGL/770' MSL.
Tree and Lights beginning 102' to 1257' from DER, from 10' to 485' right of centerline, up to 55' AGL/771' MSL.
Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.

Rwy 32: Multiple Trees and Poles beginning 701' to 1884' from DER, from 78' to 750' left of centerline, up to 84' AGL/798' MSL.
Multiple Trees 1157' to 1893' from DER, from 126' to 475' right of centerline, up to 66' AGL/780' MSL.

SPECIAL INSTRUCTIONS: When using this departure file appropriate fix and route.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF ALL RUNWAYS: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

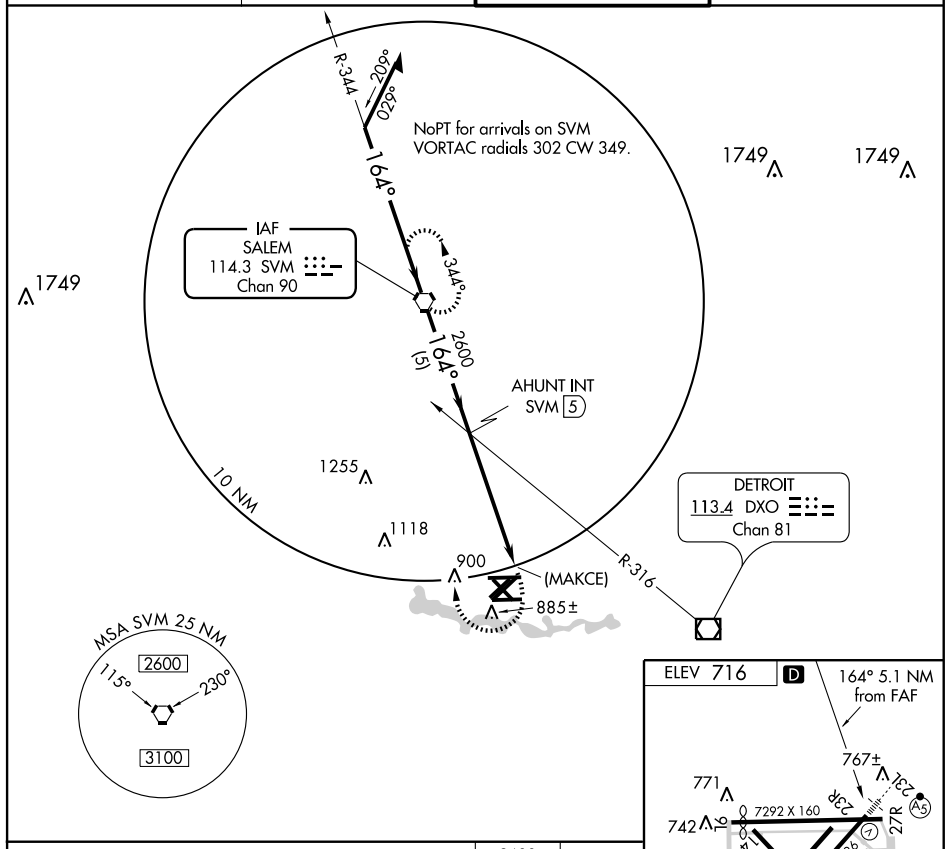
VORTAC SVM 114.3 Chan 90	APP CRS 164°	Rwy ldg N/A TDZE N/A Apt Elev 716

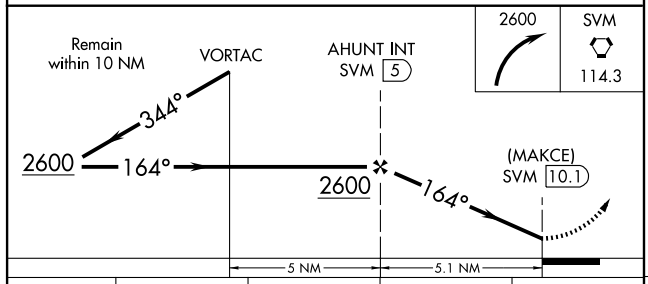
VOR or GPS-A

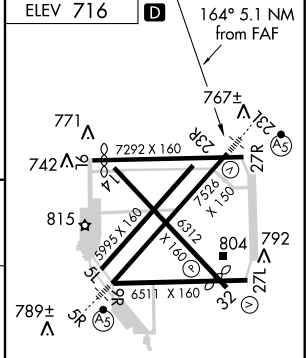
DETROIT/ WILLOW RUN (YIP)

MISSED APPROACH: Climbing right turn to 2600 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 363.2	125.275 256.9	121.75







HIRL Rwy 5R-23L
REIL Rwys 27L and 32
MIRL Rwys 9R-27L, 14-32, 5L-23R, and 9L-27R

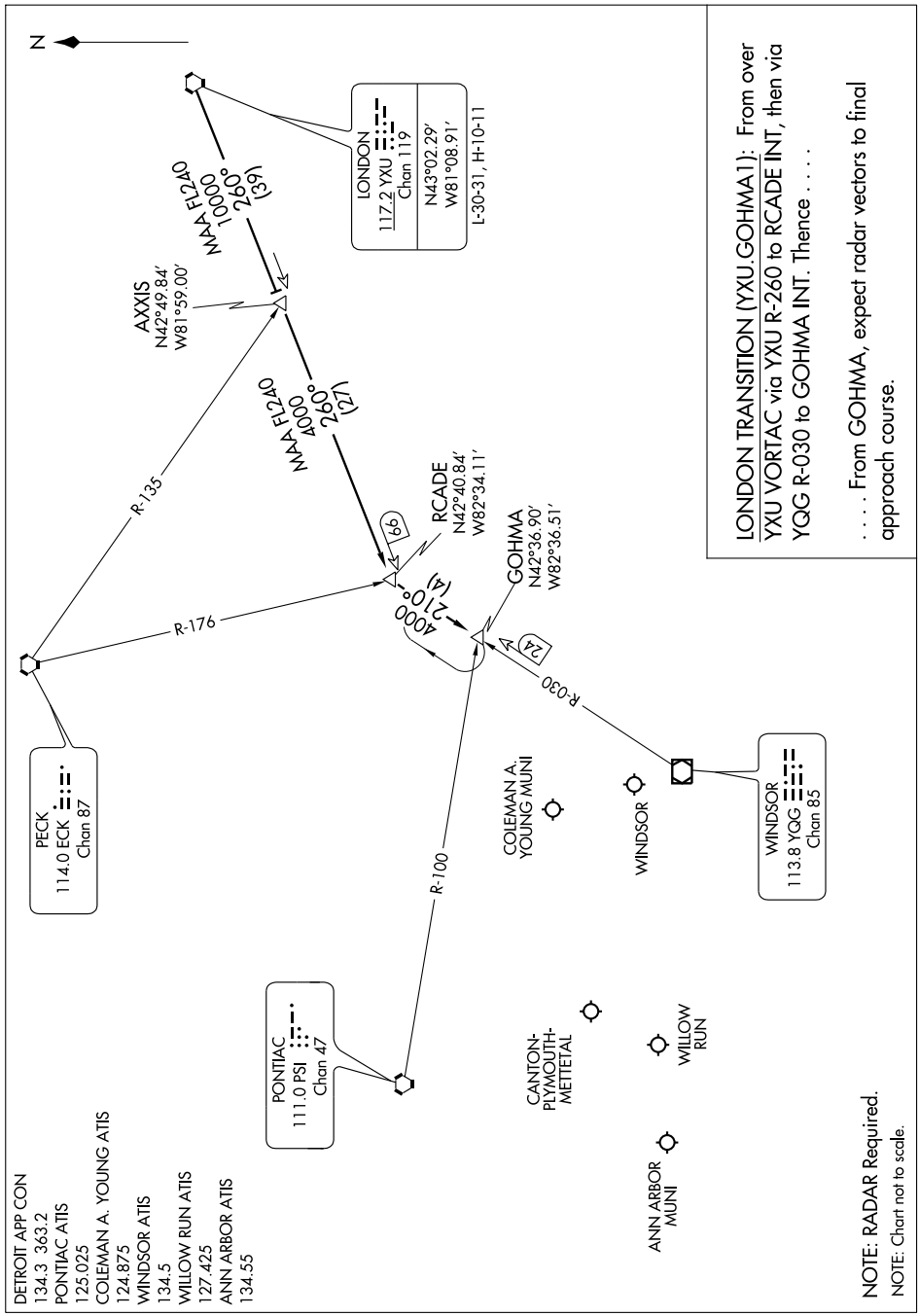
CATEGORY	A	B	C	D
CIRCLING	1420-1 704 (800-1)		1420-2 704 (800-2)	1420-2¼ 704 (800-2¼)

FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

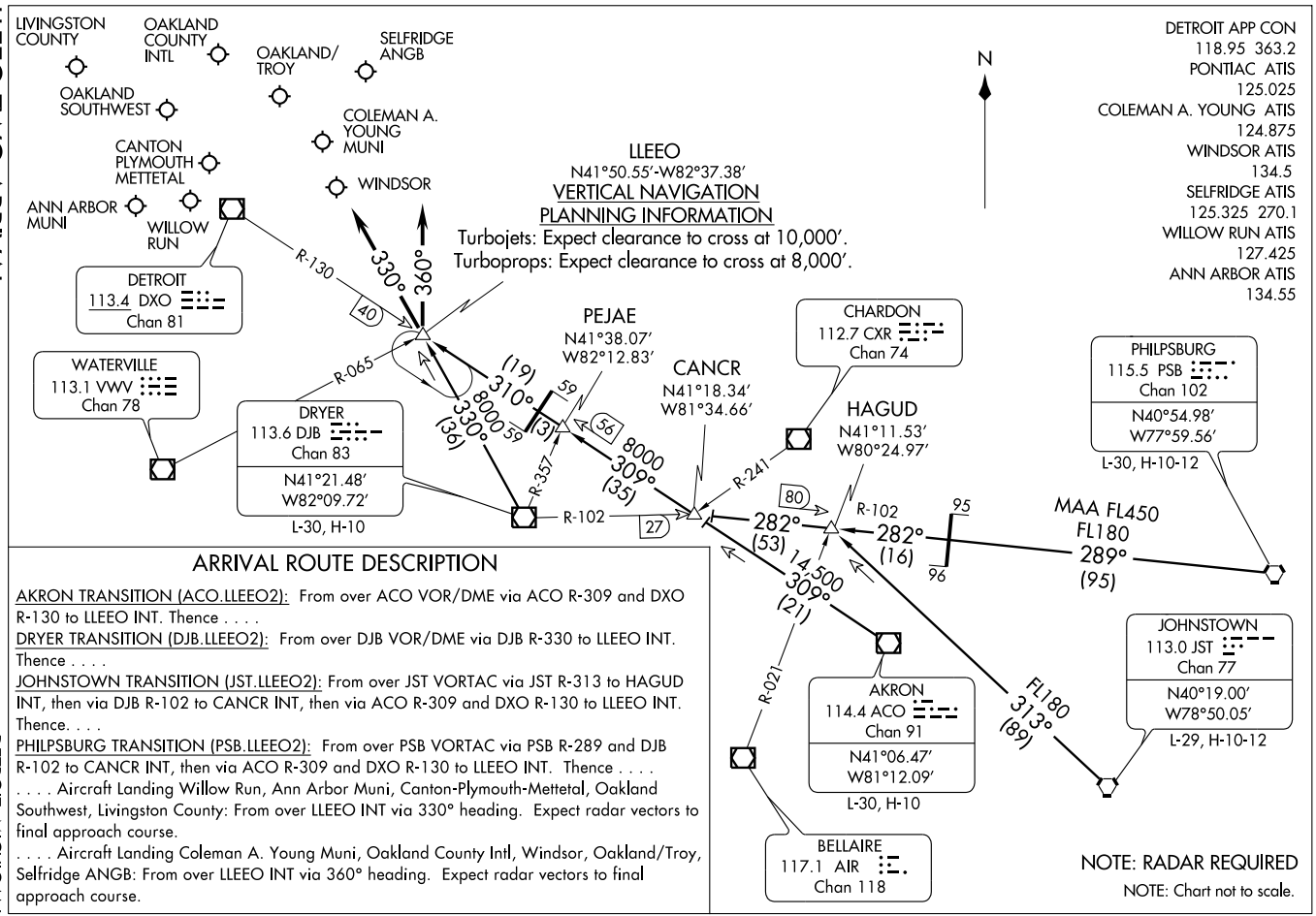
EC-1. 14 JAN 2010 to 11 FEB 2010

GOHMA ONE ARRIVAL

DETROIT, MICHIGAN



LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

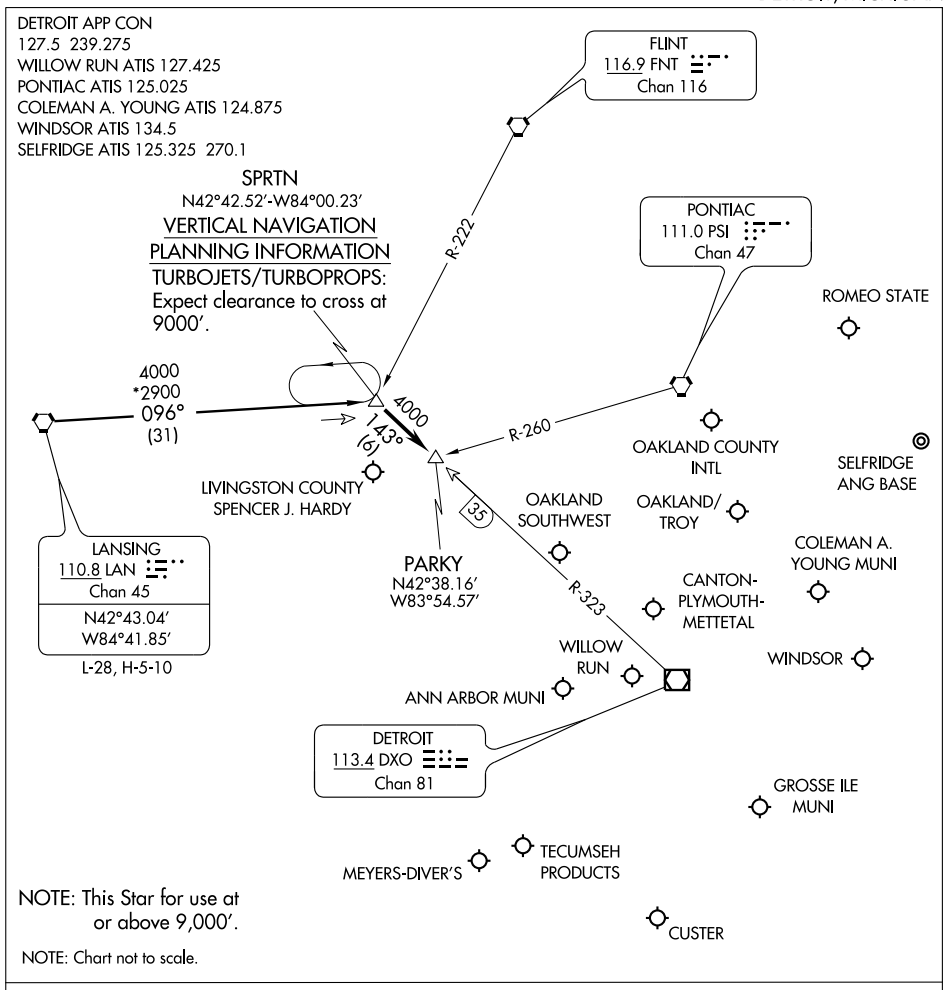
. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

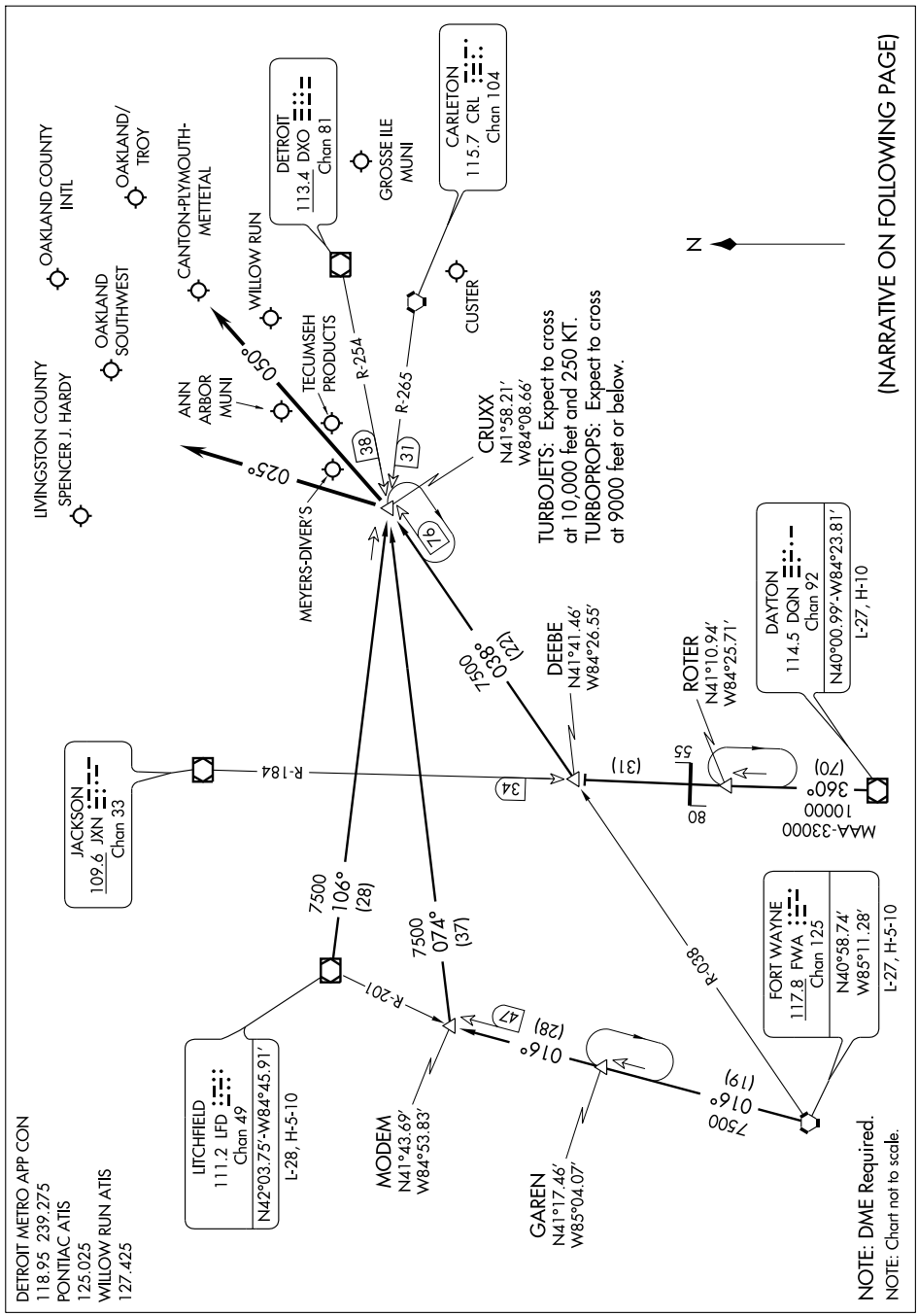
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

NDB RYS	APP CRS	Rwy ldg	4846
419	044°	TDZE	590
		Apt Elev	591

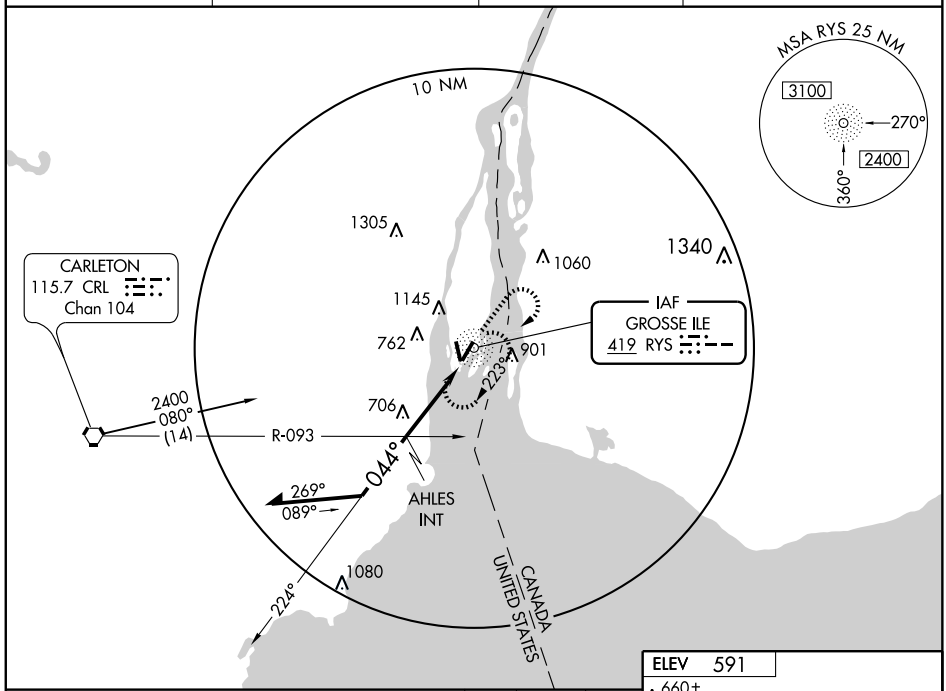
NDB RWY 4

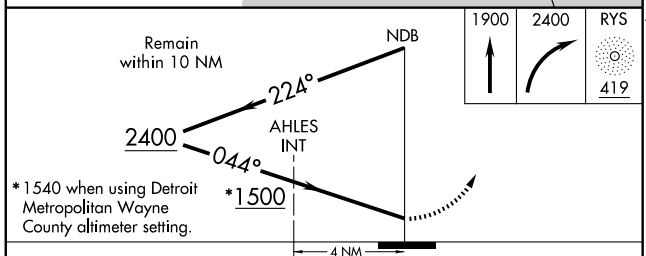
DETROIT / GROSSE ILE MUNI (ONZ)

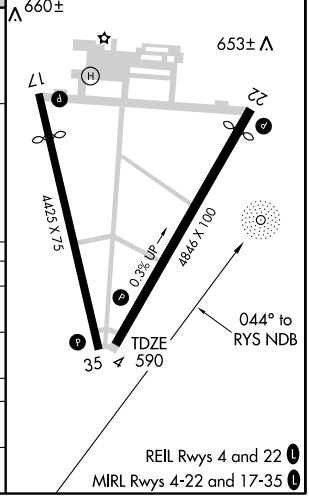
Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet. Increase AHLES fix minimums Circling Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2400 direct RYS NDB and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 363.2	121.725	123.0 (CTAF) L







CATEGORY	A	B	C	D
S-4	1500-1¼	910 (1000-1¼)	1500 - 2¾ 910 (1000-2¾)	1500 - 3 910 (1000-3)
CIRCLING	1500-1¼	909 (1000-1¼)	1500 - 2¾ 909 (1000-2¾)	1500 - 3 909 (1000-3)
	AHLES FIX MINIMUMS			
S-4	1140 - 1	550 (600-1)	1140 - 1½ 550 (600-1½)	1140 - 1¾ 550 (600-1¾)
CIRCLING	1460 - 1 869 (900-1)	1460 - 1¼ 869 (900-1¼)	1460 - 2½ 869 (900-2½)	1460 - 2¾ 869 (900-2¾)

EC-1. 14 JAN 2010 to 11 FEB 2010

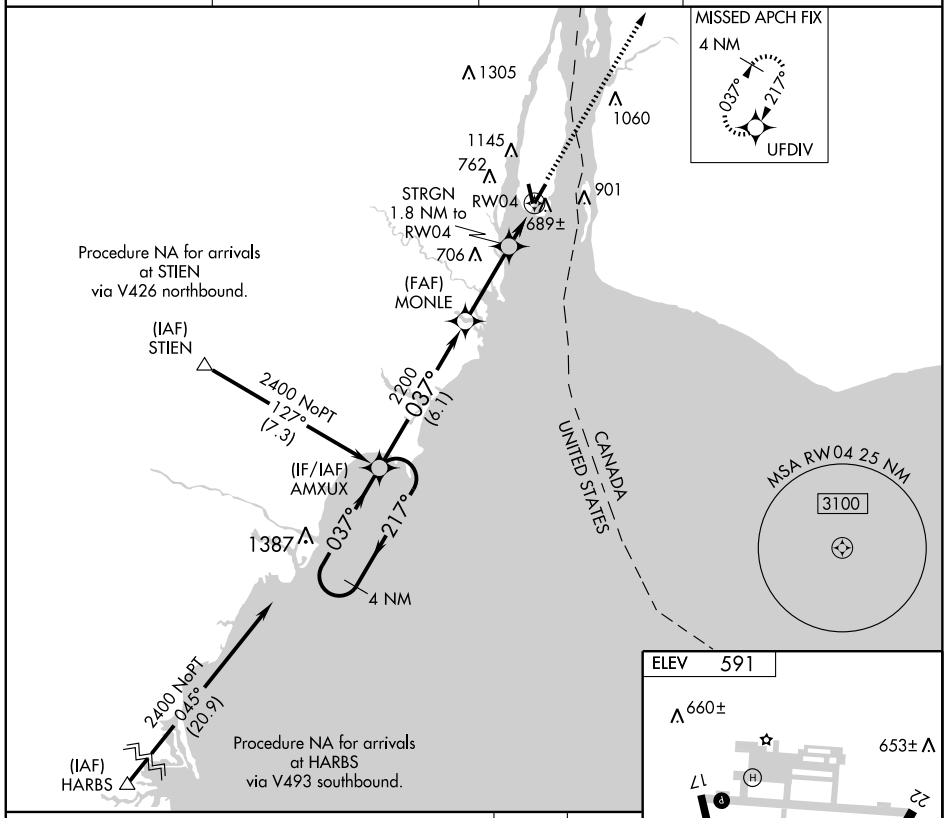
APP CRS	Rwy ldg	4846
037°	TDZE	590
	Apt Elev	591

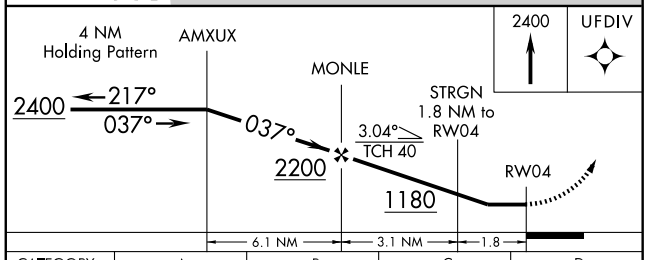
RNAV (GPS) RWY 4
DETROIT / GROSSE ILE MUNI (ONZ)

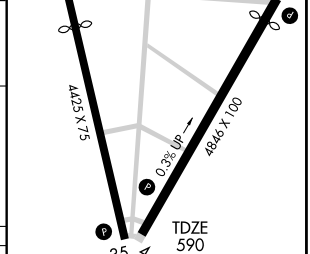
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet and Circling visibilities Cat A, C, and D ¼ mile.

MISSED APPROACH: Climb to 2400 direct UFDIV and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 363.2	121.725	123.0 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	940-1 350 (400-1)			940-1¼ 350 (400- 1¼)
CIRCLING	1460-1 869 (900-1)	1460-1¼ 869 (900-1¼)	1460-2½ 869 (900-2½)	1460-2¾ 869 (900-2¾)

EC-1. 14 JAN 2010 to 11 FEB 2010

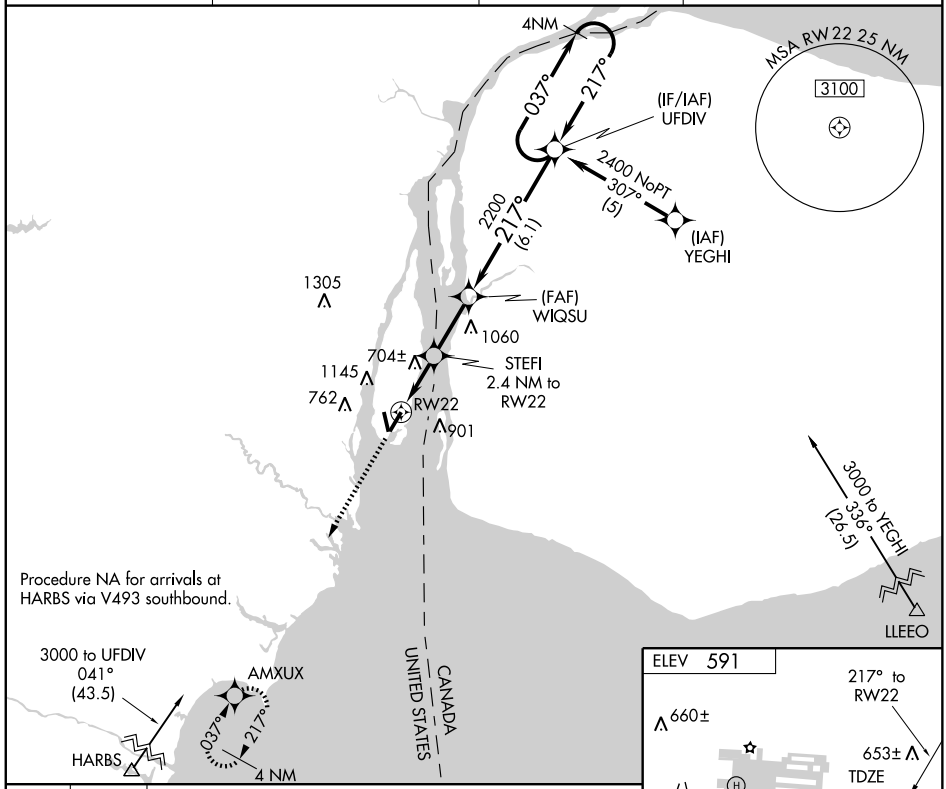
APP CRS	Rwy ldg	4418
217°	TDZE	591
	Apt Elev	591

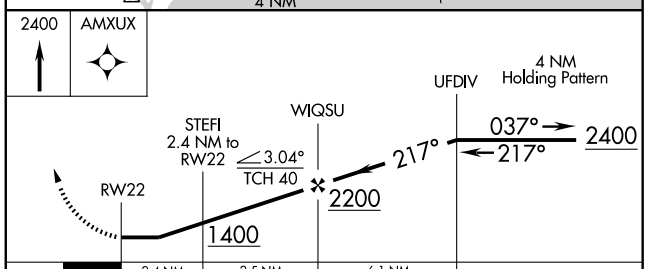
RNAV (GPS) RWY 22
DETROIT / GROSSE ILE MUNI (ONZ)

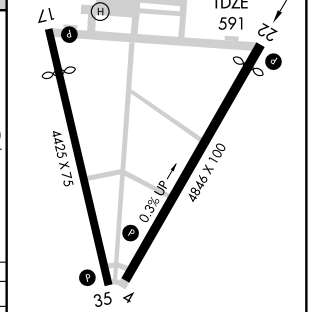
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet. Increase LNAV Cat C and Circling Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climb to 2400 direct AMXUX and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 363.2	121.725	123.0 (CTAF) L







REIL Rwys 4 and 22 L
MIRL Rwys 4-22 and 17-35 L

CATEGORY	A	B	C	D
LNAV MDA	960-1 369 (400-1)			960-1¼ 369 (400-1¼)
CIRCLING	1460-1 869 (900-1)	1460-1¼ 869 (900-1¼)	1460-2½ 869 (900-2½)	1460-2¾ 869 (900-2¾)

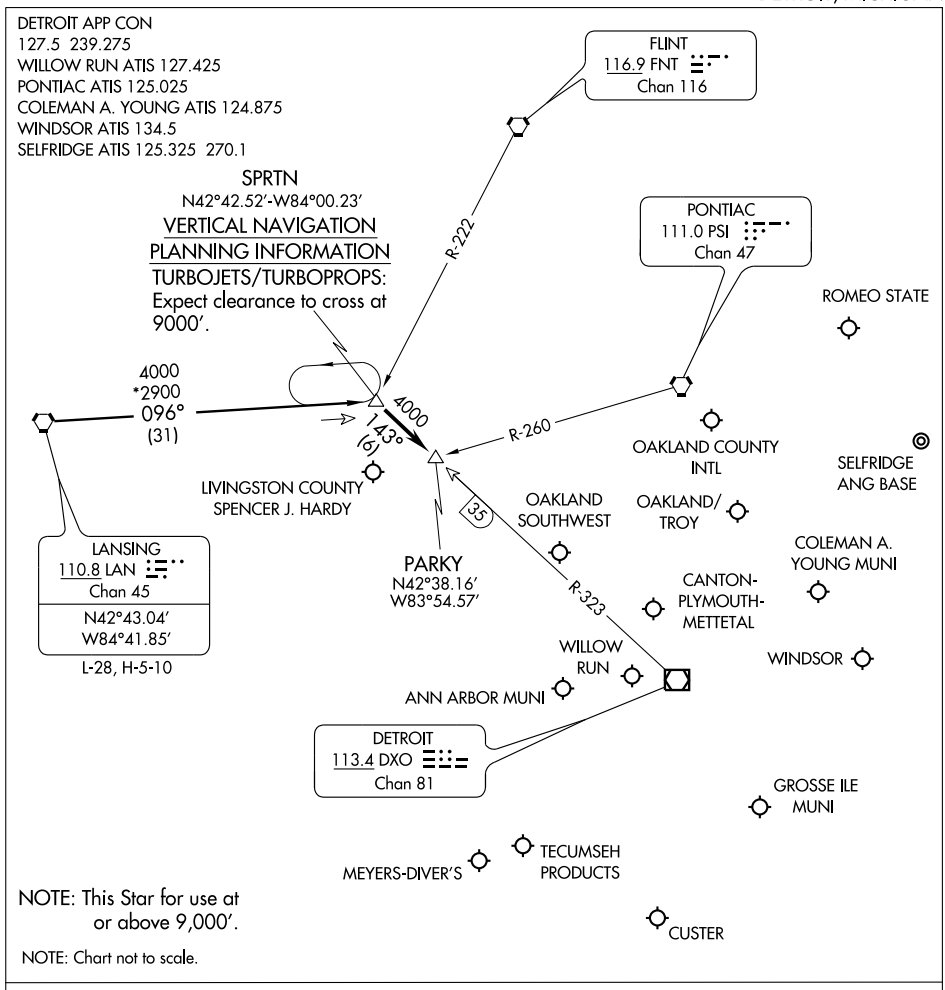
EC-1, 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

VORTAC CRL	APP CRS	Rwy ldg	N/A
115.7	080°	TDZE	N/A
Chan 104		Apt Elev	591

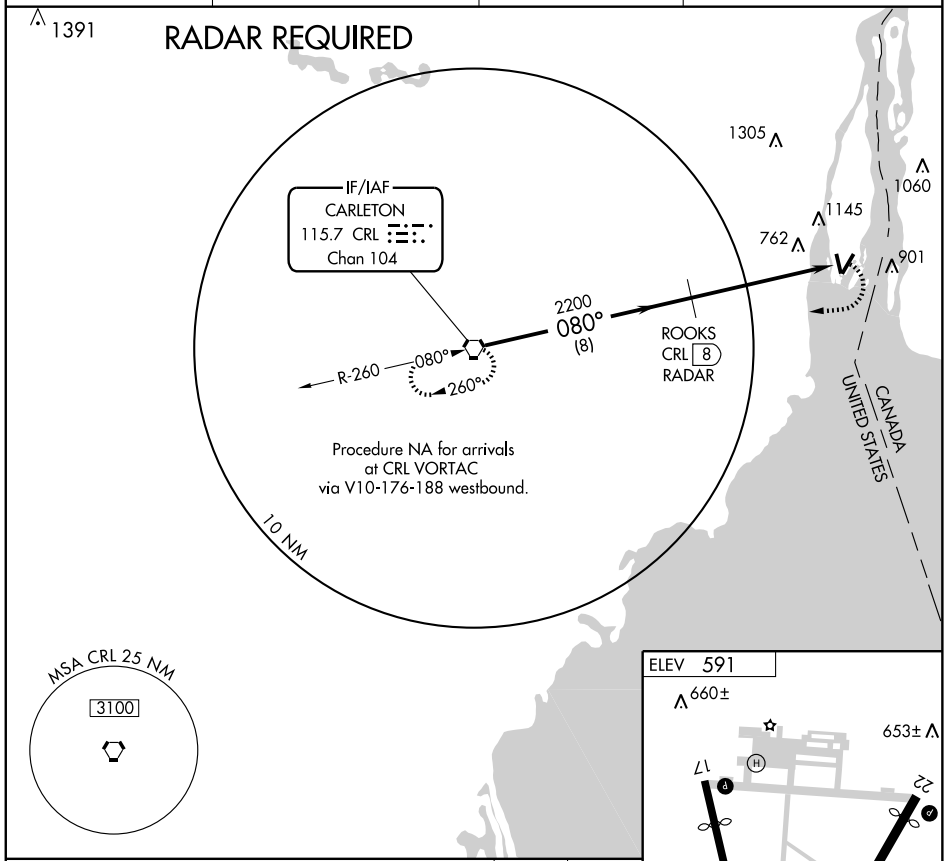
VOR-A

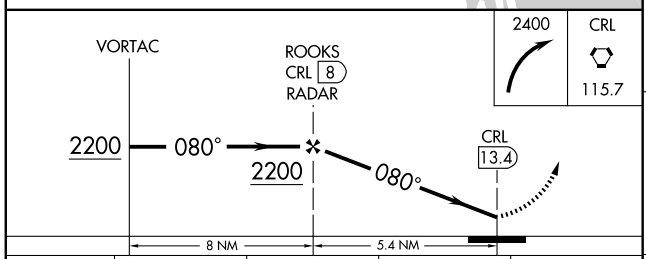
DETROIT / GROSSE ILE MUNI (ONZ)

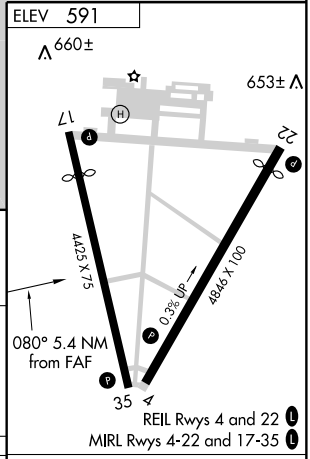
When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet and Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climbing right turn to 2400 direct CRL VORTAC and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 363.2	121.725	123.0 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	1460 - 1 869 (900-1)	1460 - 1¼ 869 (900-1¼)	1460 - 2½ 869 (900-2½)	1460 - 2¾ 869 (900-2¾)

FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

EC-1. 14 JAN 2010 to 11 FEB 2010

DOWAGIAC, MICHIGAN

AL-5321 (FAA)

VOR/DME ELX 116.6 Chan 113	APP CRS 270°	Rwy ldg 4700 TDZE 748 Apt Elev 748

VOR/DME RNAV or GPS RWY 27

DOWAGIAC MUNI (C91)

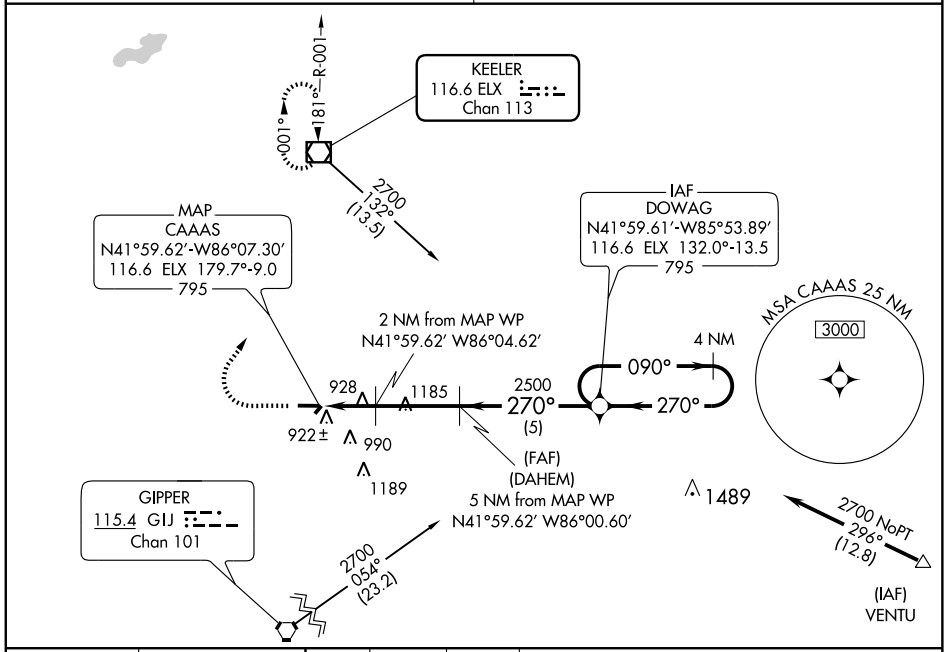
Obtain local altimeter setting on CTAF; when not received, use South Bend altimeter setting.

NA

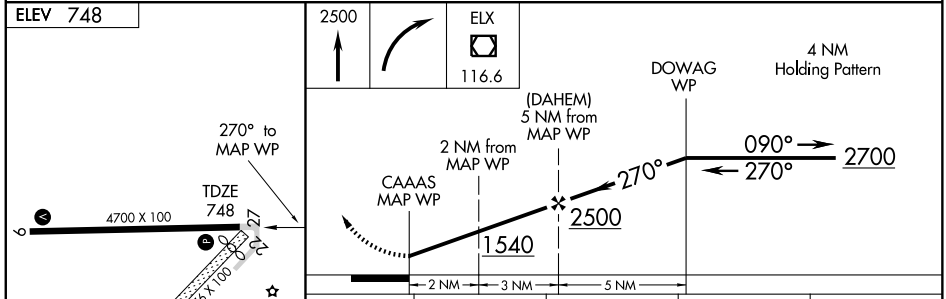
MISSED APPROACH: Climb to 2500 then right turn direct ELX VOR/DME and hold.

SOUTH BEND APP CON ★
118.55 257.8

UNICOM
122.8 (CTAF) L



ELEV 748



CATEGORY	A	B	C	D
S-27	1300-1 552 (600-1)		1300-1½ 552 (600-1½)	1300-1¾ 552 (600-1¾)
CIRCLING	1300-1 552 (600-1)		1340-1½ 592 (600-1½)	1340-2 592 (600-2)
SOUTH BEND ALTIMETER SETTING MINIMUMS				
S-27	1360-1 612 (700-1)		1360-1¾ 612 (700-1¾)	1360-2 612 (700-2)
CIRCLING	1360-1 612 (700-1)		1400-1¾ 652 (700-1¾)	1400-2 652 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ELX 116.6 Chan 113	APP CRS 181°	Rwy ldg N/A TDZE N/A Apt Elev 748

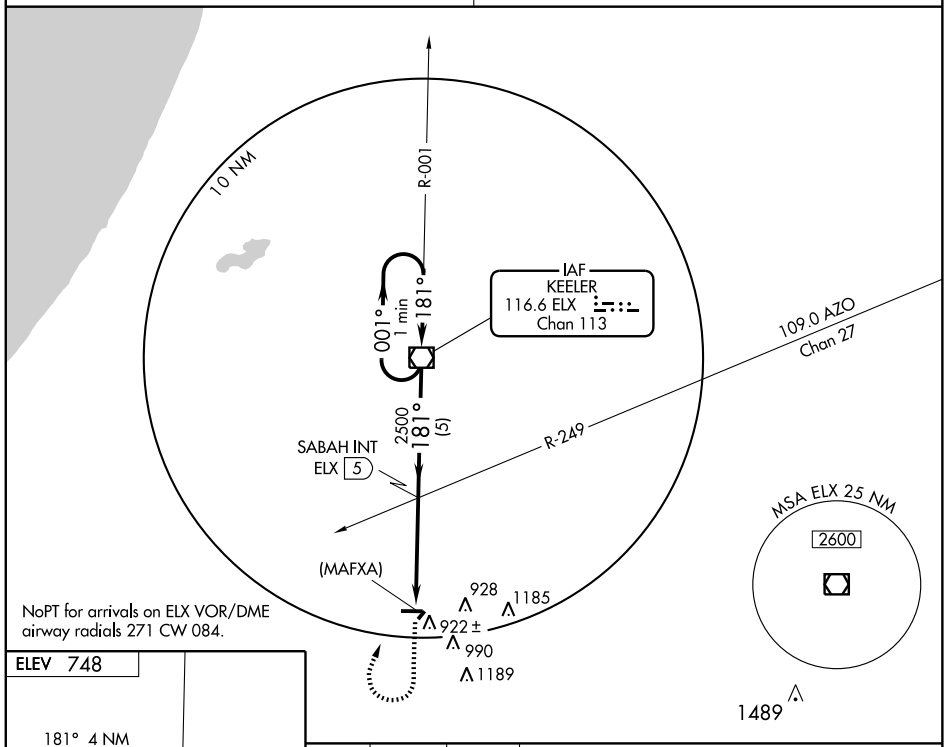
VOR or GPS-A
DOWAGIAC MUNI (C91)

T NA — Obtain local altimeter setting on CTAF; when not received, use South Bend, Indiana altimeter setting.

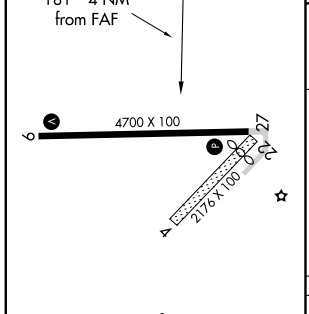
MISSED APPROACH: Climb to 2500 then right turn direct ELX VOR/DME and hold.

SOUTH BEND APP CON ★
118.55 257.8

UNICOM
122.8 (CTAF) L

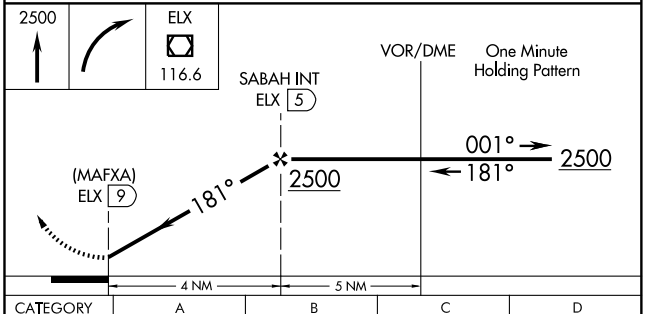


NoPT for arrivals on ELX VOR/DME airway radials 271 CW 084.



REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

FAF to MAP 4 NM					
Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20



CATEGORY	A	B	C	D
CIRCLING	1300-1 552 (600-1)		1340-1½ 592 (600-1½)	1340-2 592 (600-2)
SOUTH BEND INDIANA ALTIMETER SETTING MINIMUMS				
CIRCLING	1360-1 612 (700-1)		1400-1¾ 652 (700-1¾)	1400-2 652 (700-2)

APP CRS	Rwy ldg	3350
079°	TDZE	661
	Apt Elev	668

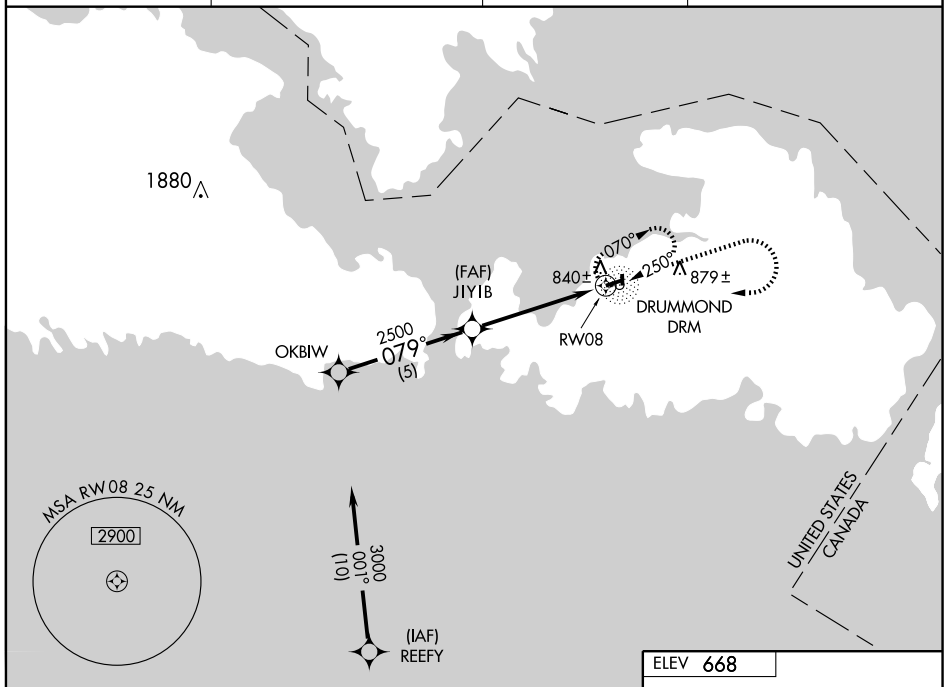
GPS RWY 8
DRUMMOND ISLAND (DRM)

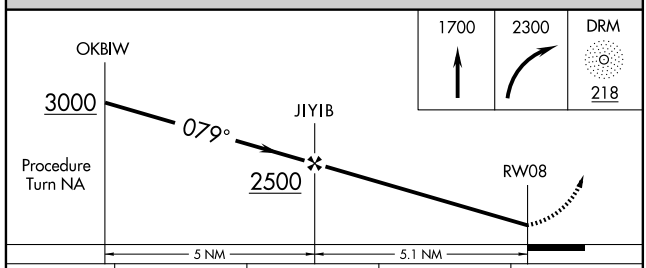
Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.

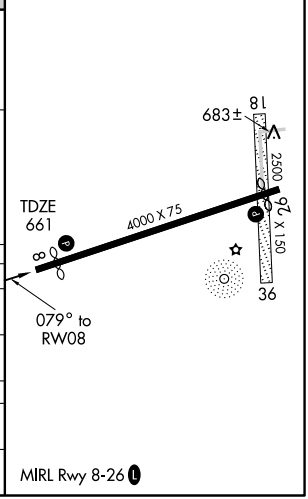
NA

MISSED APPROACH: Climb to 1700, then climbing right turn to 2300 direct DRM NDB and hold.

AWOS-3	TORONTO CENTER	GCO	UNICOM
118.325	132.65 344.5	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-8	1100-1 439 (500-1)		1100-1¼ 439 (500-1¼)	NA
CIRCLING	1160-1 492 (500-1)		1160-1½ 492 (500-1½)	NA
SAULT STE MARIE CHIPPEWA CO INTL ALTIMETER SETTING MINIMUMS				
S-8	1200-1 539 (600-1)		1200-1½ 539 (600-1½)	NA
CIRCLING	1260-1 592 (600-1)		1260-1½ 592 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3830
259°	TDZE	661
	Apt Elev	668

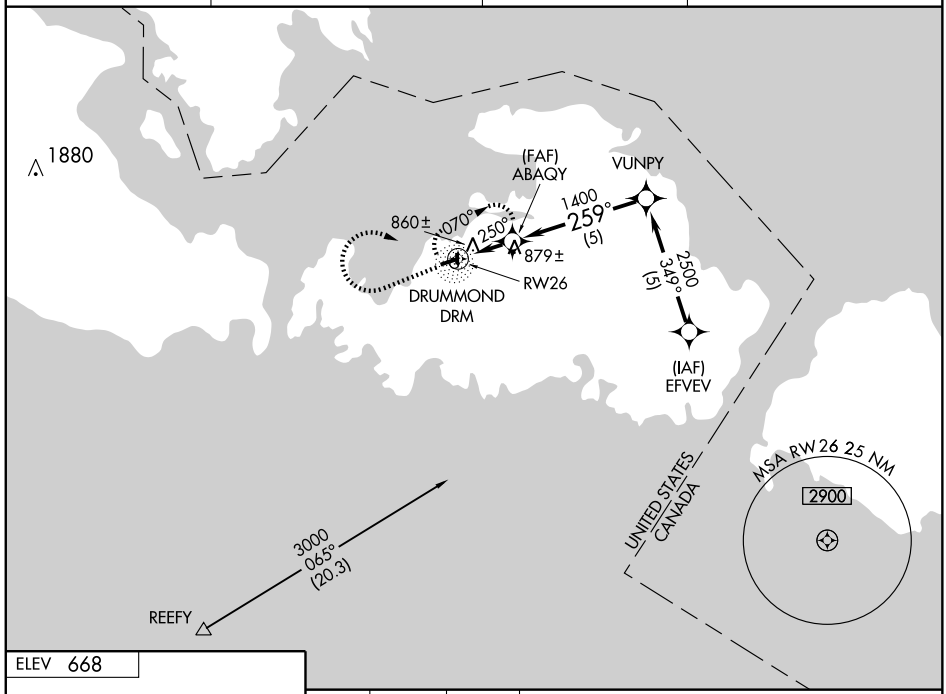
GPS RWY 26
DRUMMOND ISLAND (DRM)

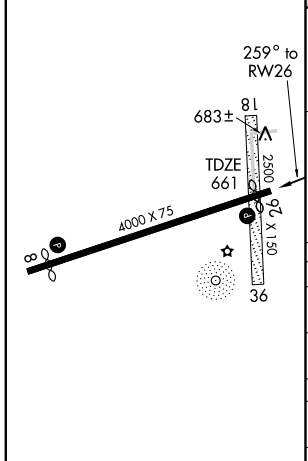
Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.

NA

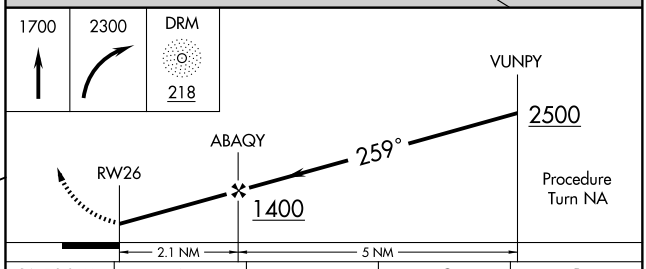
MISSED APPROACH: Climb to 1700, then climbing right turn to 2300 direct DRM NDB and hold.

AWOS-3	TORONTO CENTER	GCO	UNICOM
118.325	132.65 344.5	121.725	122.8 (CTAF) L





MIRL Rwy 8-26 L



CATEGORY	A	B	C	D
S-26	1120-1 459 (500-1)		1120-1¼ 459 (500-1¼)	NA
CIRCLING	1160-1 492 (500-1)		1160-1½ 492 (500-1½)	NA
SAULT STE MARIE CHIPPEWA CO INTL ALTIMETER SETTING MINIMUMS				
S-26	1220-1 559 (600-1)		1220-1½ 559 (600-1½)	NA
CIRCLING	1260-1 592 (600-1)		1260-1½ 592 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB DRM	APP CRS	Rwy ldg	3830
218	250°	TDZE	661
		Apt Elev	668

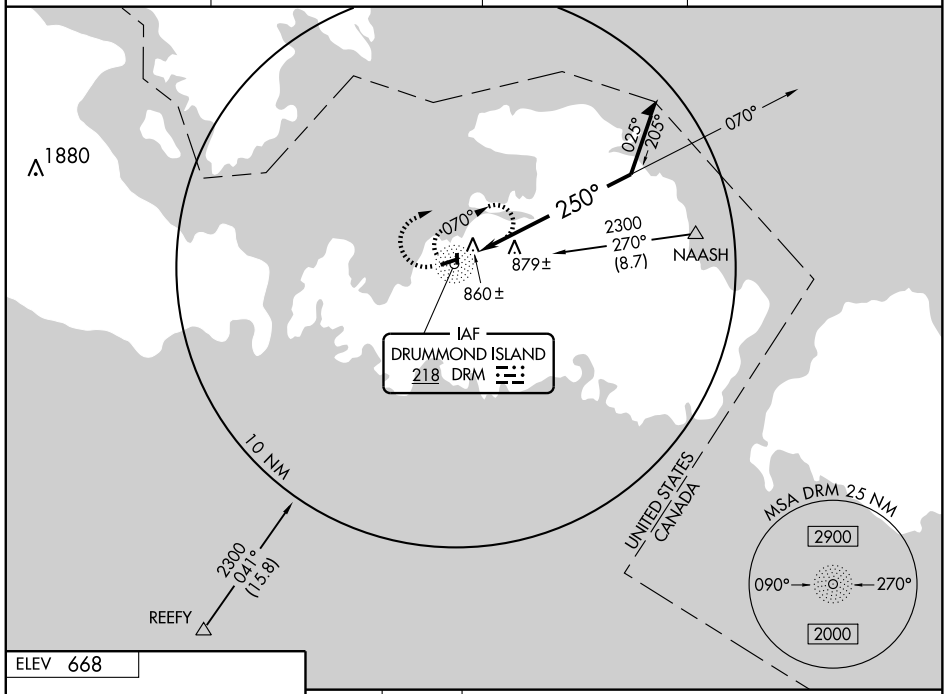
NDB RWY 26
DRUMMOND ISLAND (DRM)

Obtain local altimeter setting on CTAF; when not received, use Sault Ste Marie Chippewa County Intl altimeter setting.

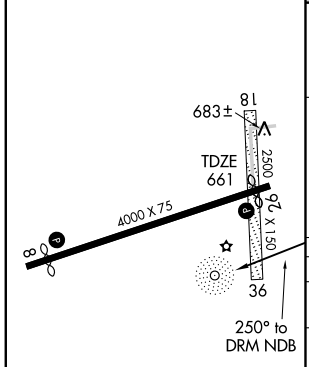
NA

MISSED APPROACH: Climbing right turn to 2300 in DRM NDB holding pattern.

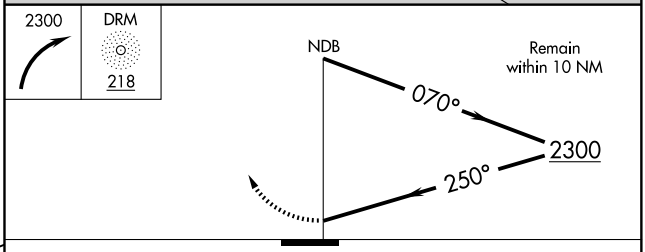
AWOS-3	TORONTO CENTER	GCO	UNICOM
118.325	132.65 344.5	121.725	122.8 (CTAF) L



ELEV 668



MIRL Rwy 8-26 L



CATEGORY	A	B	C	D
S-26	1220-1	559 (600-1)	1220-1½ 559 (600-1½)	NA
CIRCLING	1220-1	552 (600-1)	1220-1½ 552 (600-1½)	NA
SAULT STE MARIE CHIPPEWA CO INTL ALTIMETER MINIMA				
S-26	1320-1	659 (700-1)	1320-1¾ 659 (700-1¾)	NA
CIRCLING	1320-1	652 (700-1)	1320-1¾ 652 (700-1¾)	NA

VOR/DME ASP	APP CRS	Rwy ldg N/A
116.1	194°	TDZE N/A
Chan 108		Apt Elev 606

VOR or GPS-A

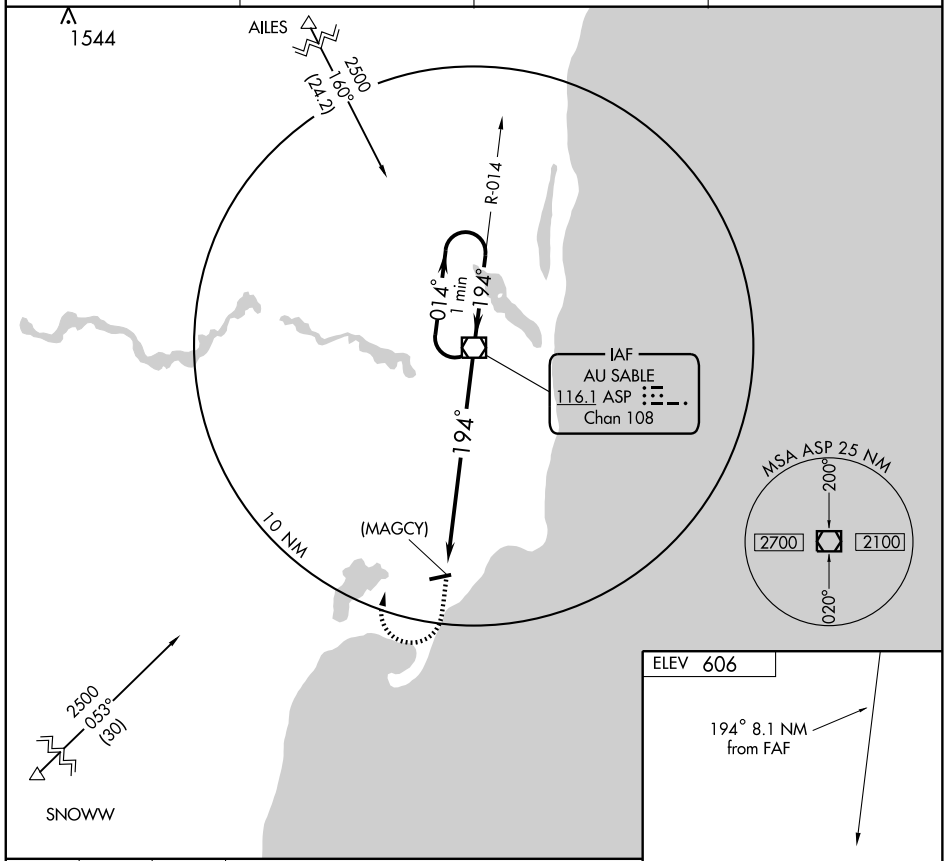
EAST TAWAS/ IOSCO COUNTY (6D9)

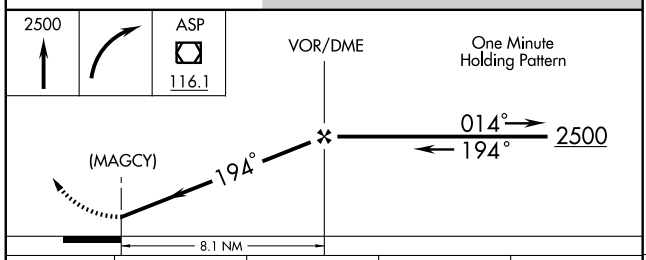
NA

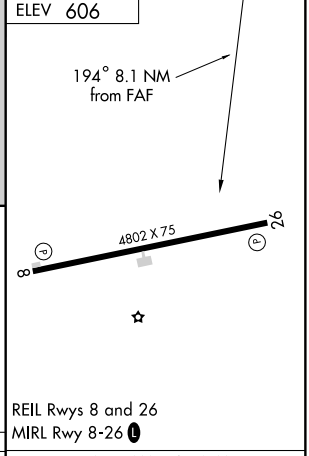
Use Oscoda-Wurtsmith altimeter setting.

MISSED APPROACH: Climb to 2500 then right turn direct ASP VOR/DME and hold.

OSCODA-WURTSMITH AWOS-3	MINNEAPOLIS CENTER	UNICOM	
116.1	118.525 251.15	122.8 (CTAF)	122.85 L







REIL Rwys 8 and 26
MIRL Rwy 8-26 L

CATEGORY	A	B	C	D
CIRCLING	1120 - 1	514 (600-1)	1120 - 1½ 514 (600-1½)	1280 - 2¼ 674 (700-2¼)

FAF to MAP 8.1 NM					
Knots	60	90	120	150	180
Min:Sec	8:06	5:24	4:03	3:14	2:42

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC LAN	APP CRS	Rwy ldg	N/A
110.8	171°	TDZE	N/A
Chan 45		Apt Elev	931

VOR or GPS-A

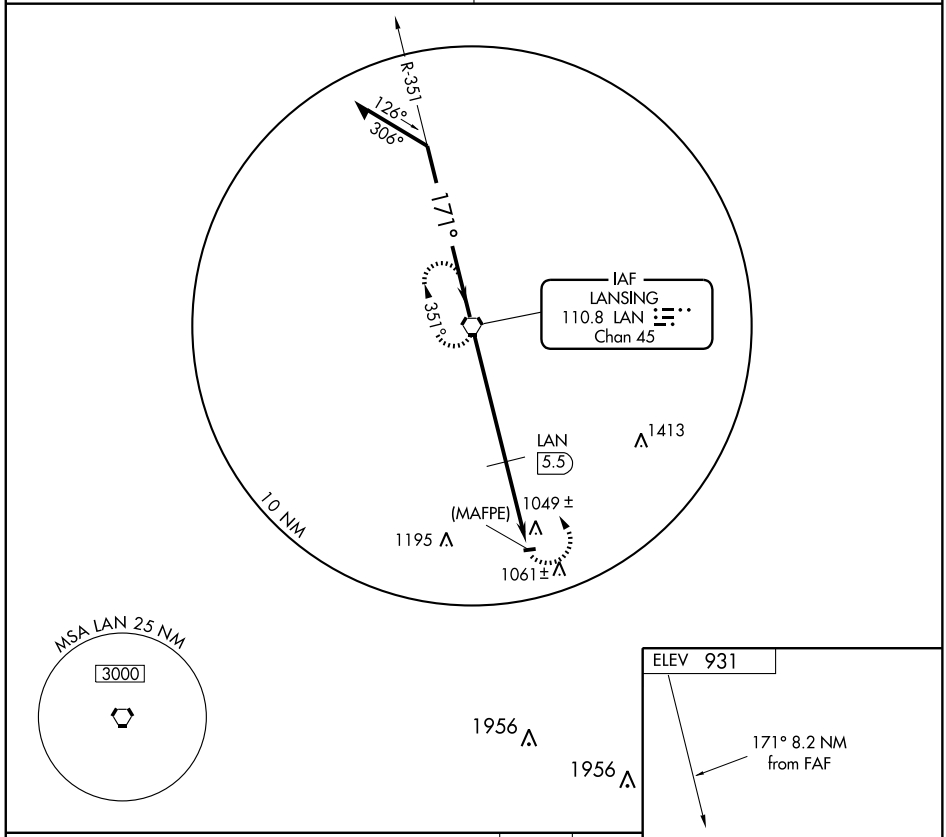
EATON RAPIDS / SKYWAY ESTATES (6ØG)

NA

Use Lansing altimeter setting.

MISSED APPROACH: Climbing left turn to 3000 direct LAN VORTAC and hold.

LANSING APP CON	CTAF
118.65 226.4	122.9 L



MIRL Rwy 8-26 L

CATEGORY	A	B	C	D
CIRCLING	1600-1 669 (700-1)		NA	
DME MINIMUMS				
CIRCLING	1400-1 469 (500-1)		NA	

FAF to MAP 8.2 NM					
Knots	60	90	120	150	180
Min:Sec	8:12	5:28	4:06	3:17	2:44

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-ESC	APP CRS	Rwy ldg	6498
109.3	094°	TDZE	609
		Apt Elev	609

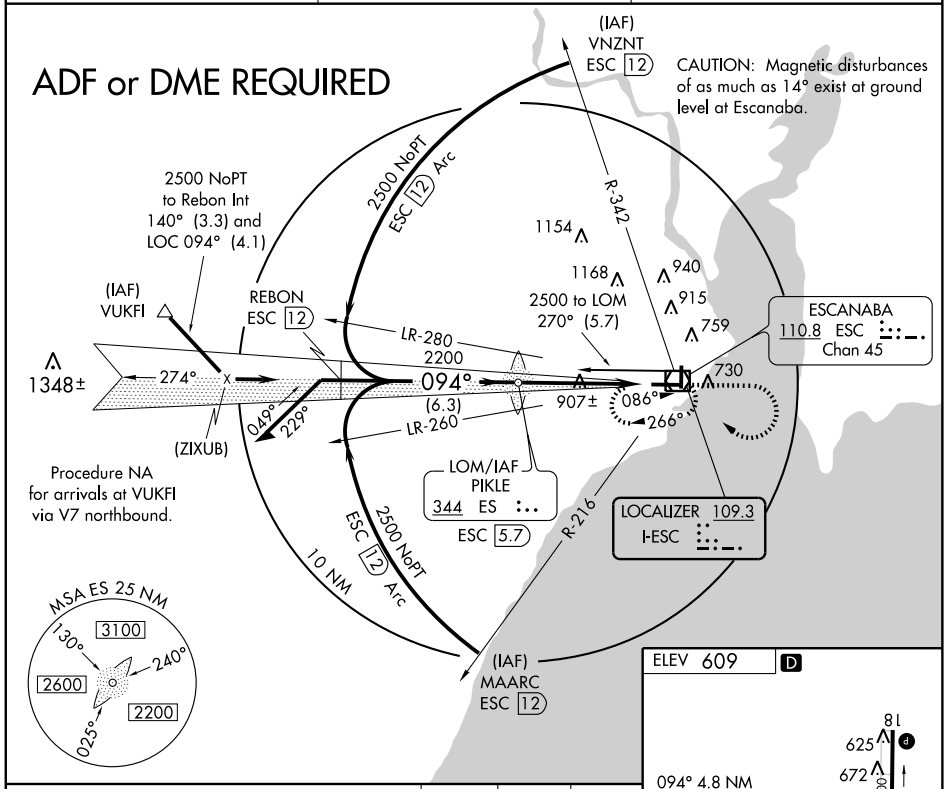
ILS or LOC RWY 9

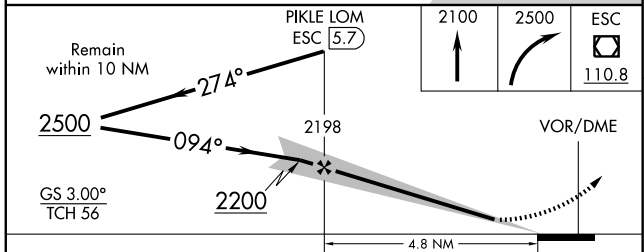
ESCANABA / DELTA COUNTY (ESC)

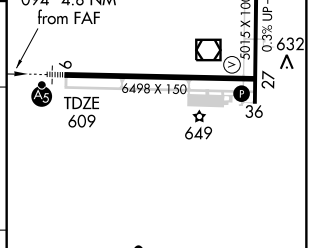
MALSR

MISSED APPROACH: Climb to 2100 then climbing right turn to 2500 direct ESC VOR/DME and hold, continue climb-in-hold to 2500.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L







HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

CATEGORY	A	B	C	D
S-ILS 9	809-½ 200 (200-½)			
S-LOC 9	1160-½ 551 (600-½)		1160-1 551 (600-1)	1160-1¼ 551 (600-1¼)
CIRCLING	1160-1 551 (600-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

FAF to MAP 4.8 NM

Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-ESC	APP CRS	Rwy ldg	6498
109.3	274°	TDZE	596
		Apt Elev	609

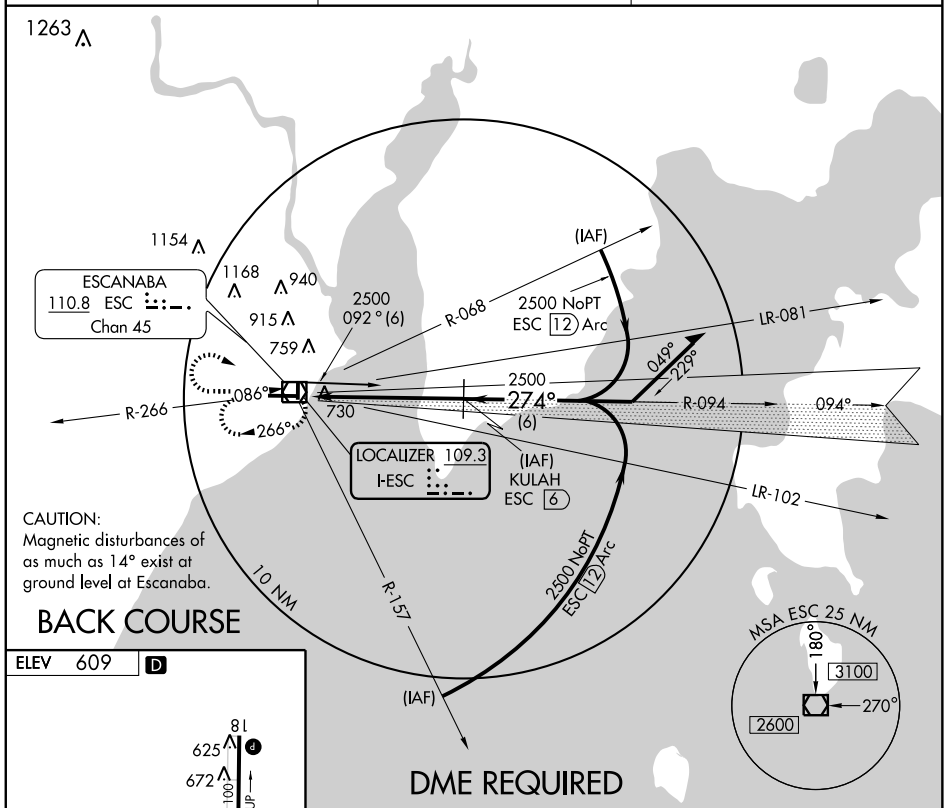
LOC BC RWY 27

ESCANABA / DELTA COUNTY (ESC)

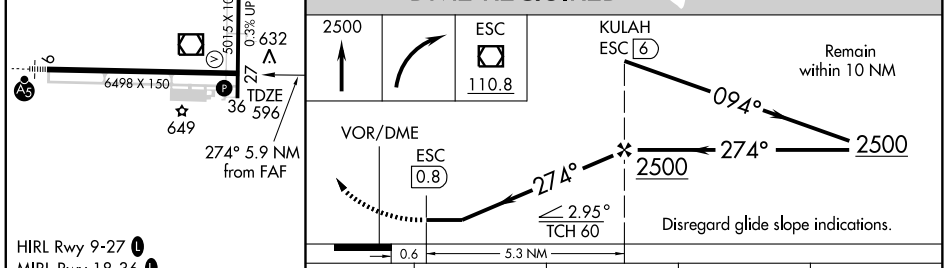
DME from ESC VOR/DME. Simultaneous reception of I-ESC and ESC DME required.

MISSED APPROACH: Climb to 2500 then right turn direct ESC VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L



DME REQUIRED



HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

CATEGORY	A	B	C	D
S-27	980-1 384 (400-1)			980-1¼ 384 (400-1¼)
CIRCLING	1060-1 451 (500-1)	1100-1 491 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

ESCANABA, MICHIGAN

AL-5123 (FAA)

WAAS CH 70511 W09A	APP CRS 094°	Rwy ldg 6498 TDZE 609 Apt Elev 609

RNAV (GPS) RWY 9

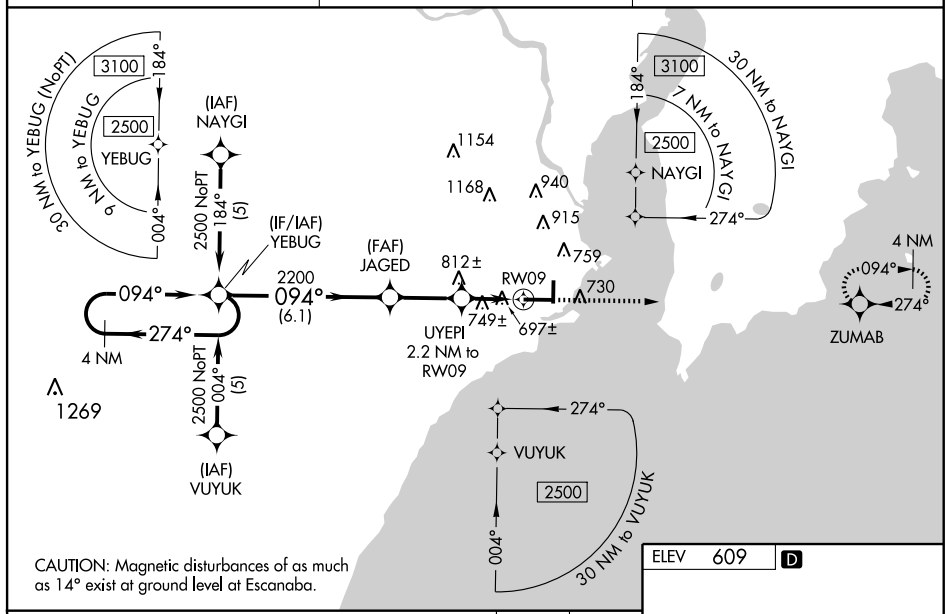
ESCANABA / DELTA COUNTY (ESC)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sawyer Intl altimeter setting and increase LPV DA to 987, LNAV/VNAV DA to 1145, increase all MDA 180 feet, increase LPV visibility all Cats ¼ mile, LNAV/VNAV visibility all Cats ½ mile, increase LNAV Cat C visibility ½ mile, LNAV Cat D visibility ¼ mile, increase Circling Cat C visibility ¾ mile, and Circling Cat D visibility ½ mile. For inoperative MALSR, increase LNAV Cat D visibility to 1¼. For inoperative MALSR, when using Sawyer Intl altimeter setting, increase LPV all Cats visibility to 1¼. VDP NA when using Sawyer Intl altimeter setting. Baro-VNAV NA when using Sawyer Intl altimeter setting.

MALSR

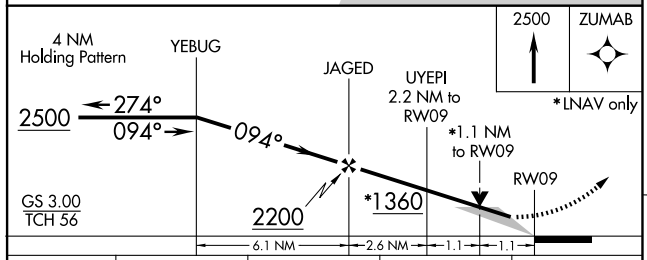
MISSED APPROACH: Climb to 2500 direct ZUMAB and hold.

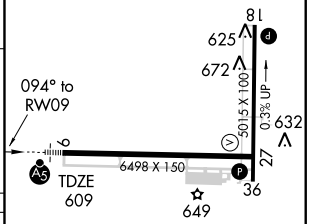
AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L



CAUTION: Magnetic disturbances of as much as 14° exist at ground level at Escanaba.

ELEV 609 D





CATEGORY	A	B	C	D
LPV DA	809-½ 200 (200-½)			
LNAV/VNAV DA	967-¾ 358 (400-¾)			
LNAV MDA	1000-½ 391 (400-½)			1000-1 391 (400-1)
CIRCLING	1060-1 451 (500-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-1¼)

HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

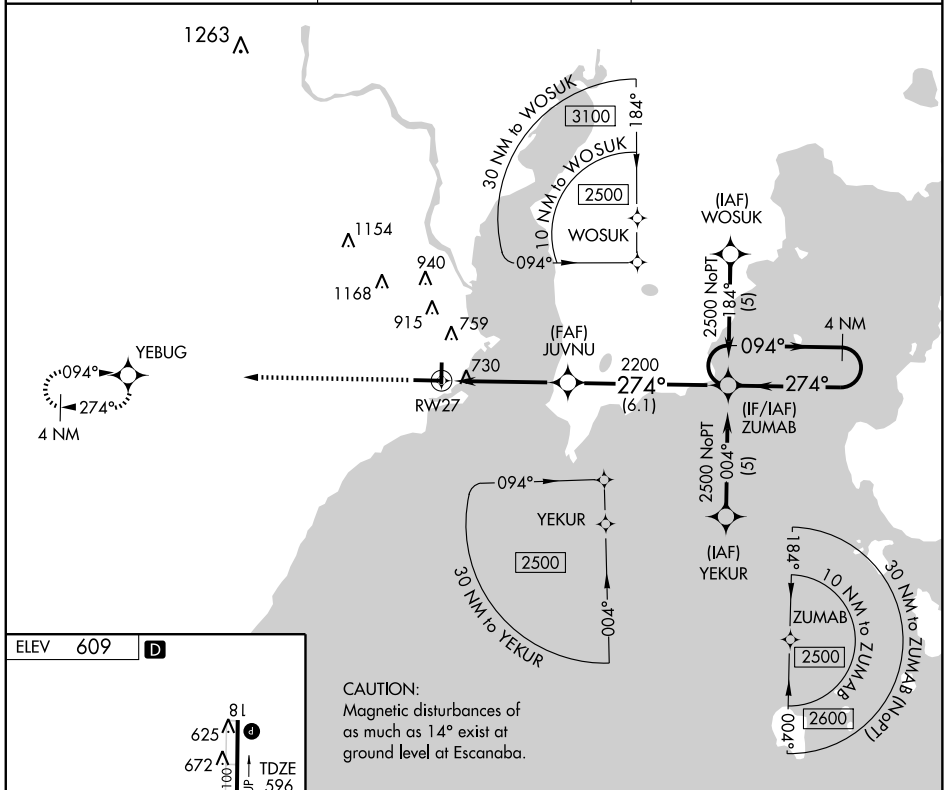
APP CRS	Rwy ldg	6498
274°	TDZE	596
	Apt Elev	609

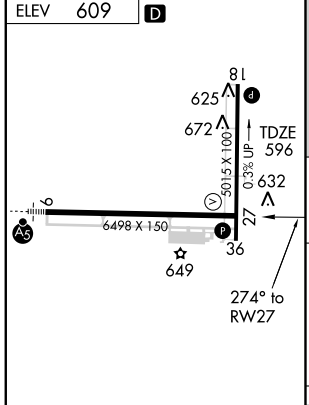
RNAV (GPS) RWY 27
ESCANABA / DELTA COUNTY (ESC)

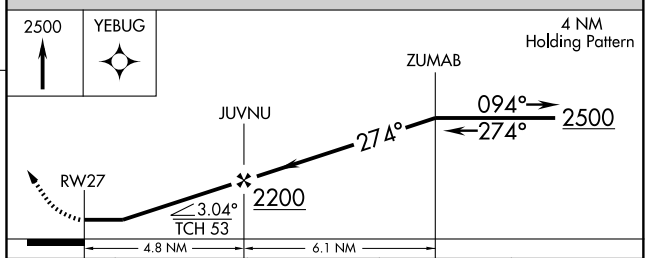
DME/DME RNP-0.3 NA. Visibility reduction by helicoptors NA. When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase LNAV Cat C and D visibility ½ mile, increase Circling Cat C visibility ¾ mile, and Circling Cat D visibility ½ mile.

MISSED APPROACH: Climb to 2500 direct YEBUG and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1040-1 444 (500-1)		1040-1¼ 444 (500-1¼)	1040-1½ 444 (500-1½)
CIRCLING	1060-1 451 (500-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

ESCANABA, MICHIGAN

AL-5123 (FAA)

VOR/DME ESC	APP CRS	Rwy ldg	6498
110.8	086°	TDZE	609
Chan 45		Apt Elev	609

VOR RWY 9

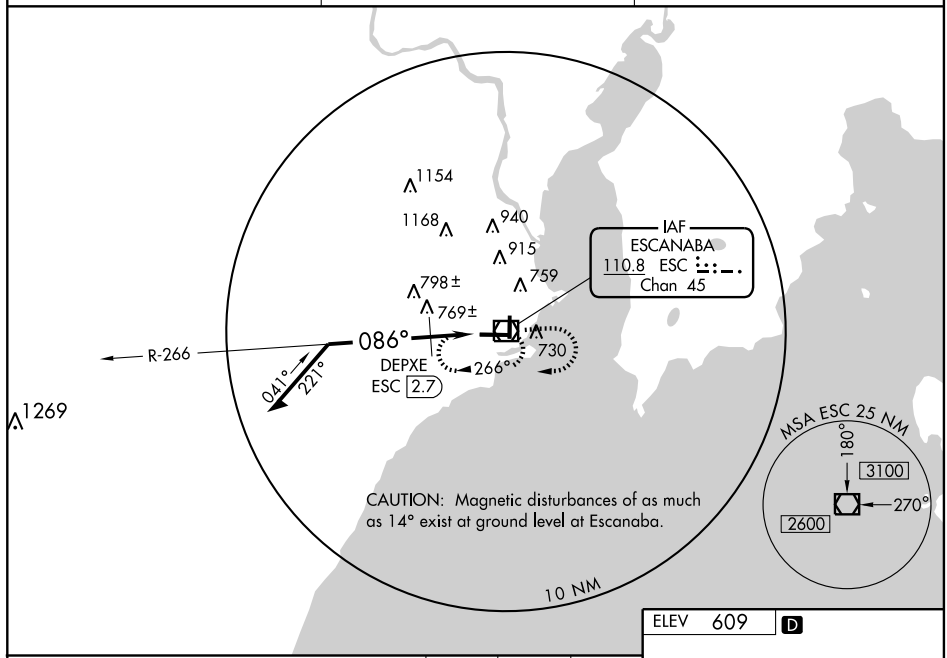
ESCANABA / DELTA COUNTY (ESC)

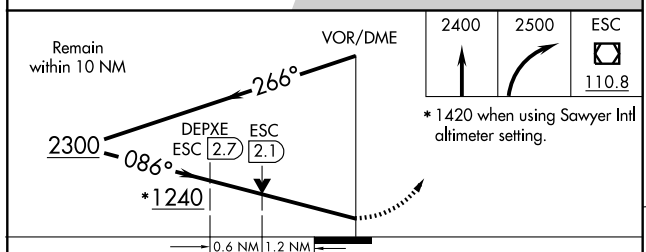
When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase S-9 Cat B visibility ¼ mile, Cats C and D visibility ¾ mile, Circling Cat B visibility ¼ mile, Cat C visibility ¾ mile, Cat D visibility ½ mile, increase DEPXE fix minimums S-9 Cats C and D visibility ½ mile, Circling Cat C visibility ¾ mile, Cat D visibility ½ mile. VDP NA when using Sawyer Intl altimeter setting.

MALSR

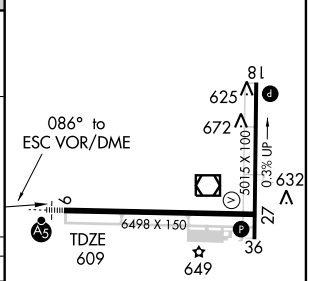
MISSED APPROACH: Climb to 2400 then climbing right turn to 2500 direct ESC VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L





* 1420 when using Sawyer Intl altimeter setting.



CATEGORY	A	B	C	D
S-9	1240-½ 631 (700-½)		1240-1¼ 631 (700-1¼)	1240-1½ 631 (700-1½)
CIRCLING	1240-1 631 (700-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)
DEPXE FIX MINIMUMS				
S-9	1040 -½ 431 (500-½)		1040-¾ 431 (500-¾)	1040-1 431 (500-1)
CIRCLING	1060 -1 451 (500-1)		1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1, 14 JAN 2010 to 11 FEB 2010

VOR/DME ESC 110.8 Chan 45	APP CRS 282°	Rwy ldg 6498 TDZE 596 Apt Elev 609

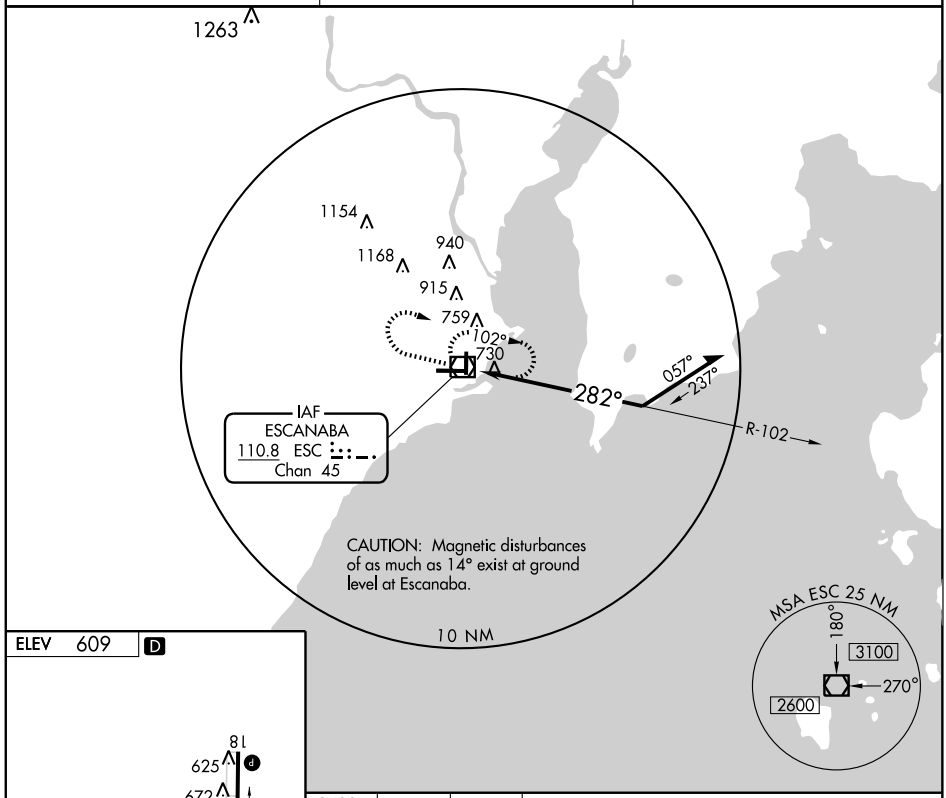
VOR RWY 27

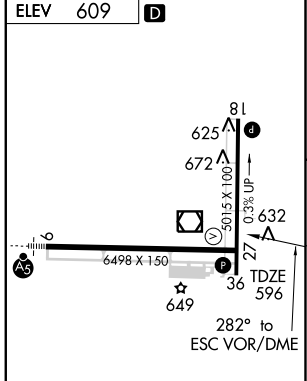
ESCANABA / DELTA COUNTY (ESC)

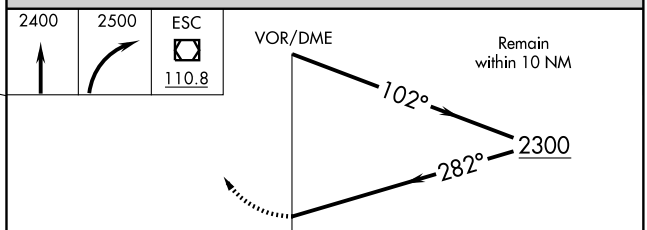
Visibility reduction by helicopters NA.
When local altimeter setting not received, use Sawyer Intl altimeter setting and increase all MDA 180 feet, increase S-9 Cat C and D visibility ½ mile, Circling Cat C visibility ¾ mile, Cat D visibility ½ mile.

MISSED APPROACH:Climb to 2400 then climbing right turn to 2500 direct ESC VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-27	1080 -1	484 (500-1)	1080 -1¼ 484 (500-1¼)	1080 -1½ 484 (500-1½)
CIRCLING	1080 -1	471 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

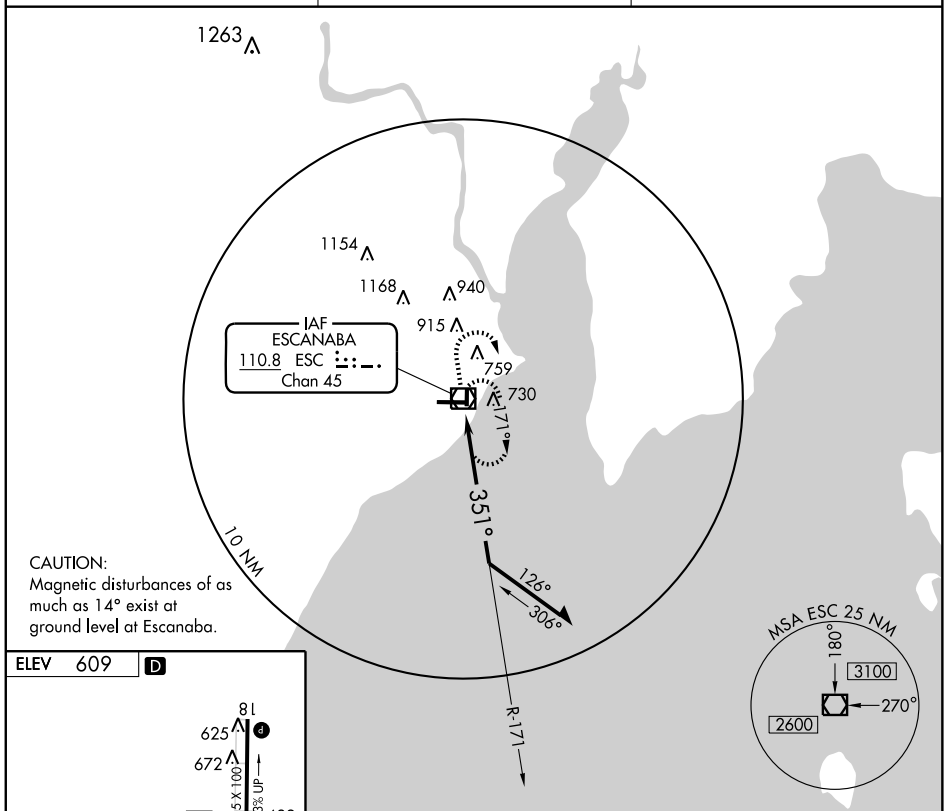
VOR/DME ESC 110.8 Chan 45	APP CRS 351°	Rwy ldg 5015 TDZE 601 Apt Elev 609

VOR RWY 36

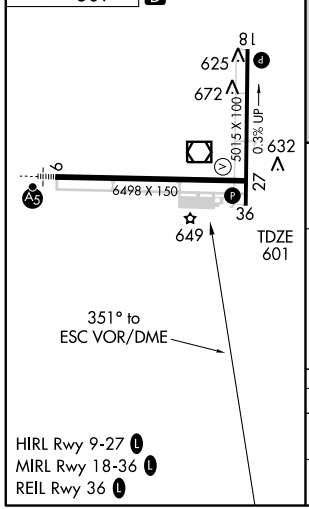
ESCANABA / DELTA COUNTY (ESC)

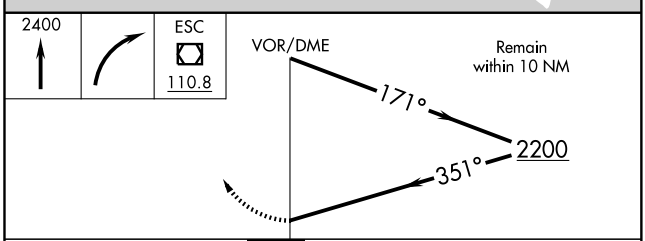
MISSED APPROACH: Climb to 2400, then right turn direct ESC VOR/DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L



CAUTION:
Magnetic disturbances of as much as 14° exist at ground level at Escanaba.





HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

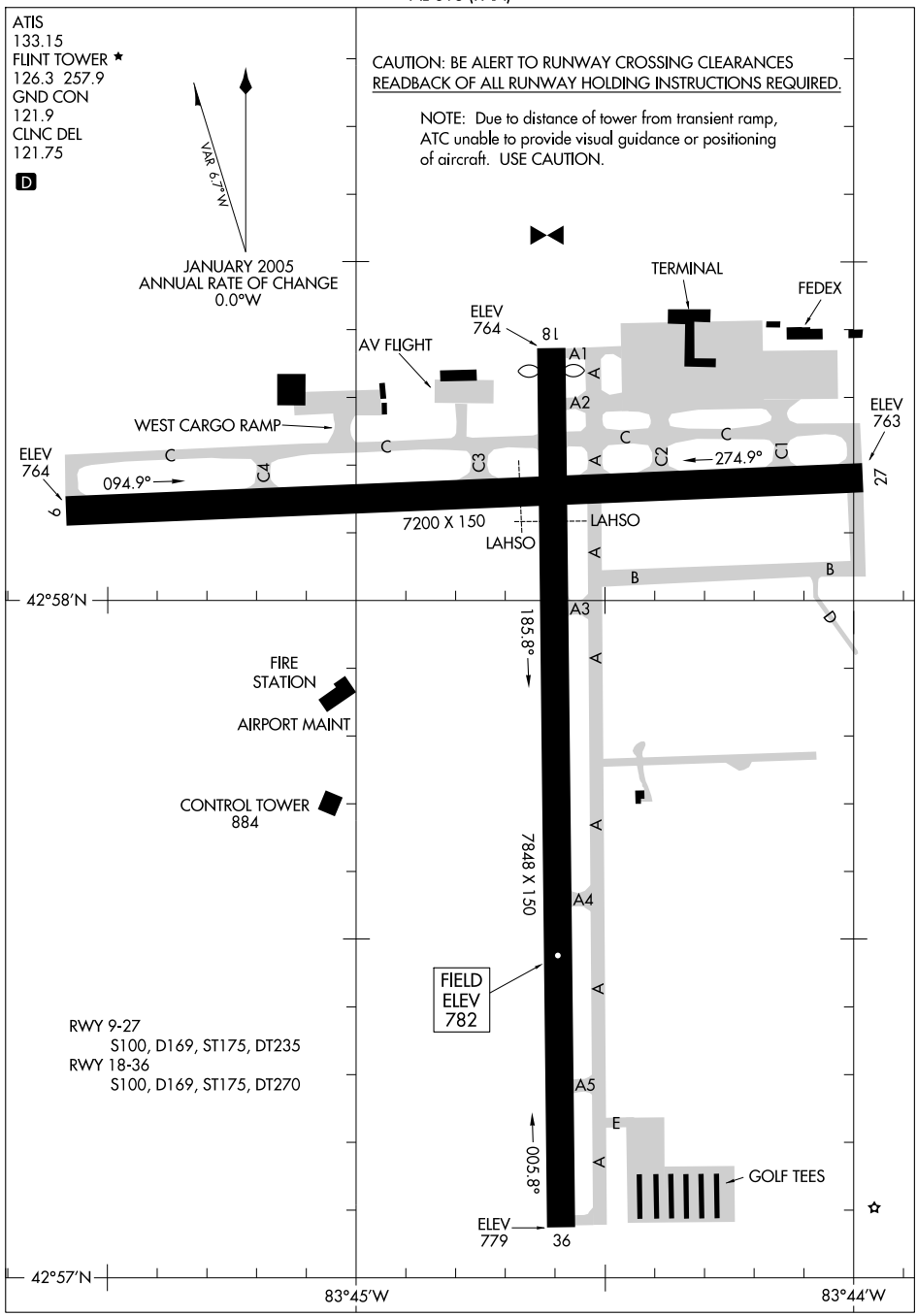
CATEGORY	A	B	C	D
S-36	1080-1 479 (500-1)		1080-1¼ 479 (500-1¼)	1080-1½ 479 (500-1½)
CIRCLING	1080-1 471 (500-1)	1100-1 491 (500-1)	1240-1¾ 631 (700-1¾)	1280-2¼ 671 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-618 (FAA)

FLINT / BISHOP INTL (FNT)
FLINT, MICHIGAN



LOC I-FNT	APP CRS	Rwy ldg	7200
109.9	094°	TDZE	771
		Apt Elev	782

ILS RWY 9

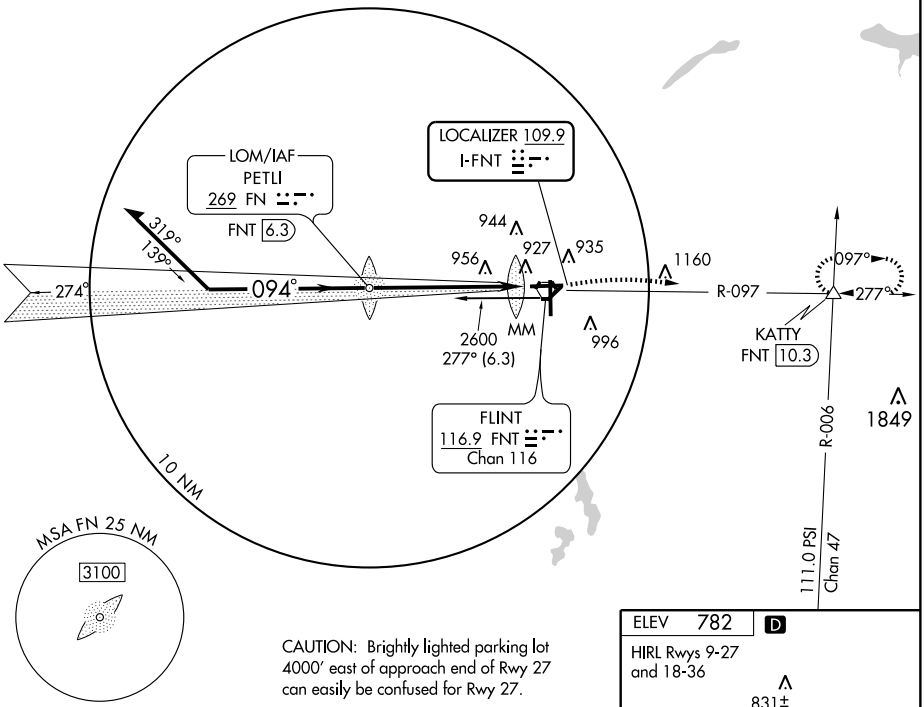
FLINT / BISHOP INTL (FNT)

ASR

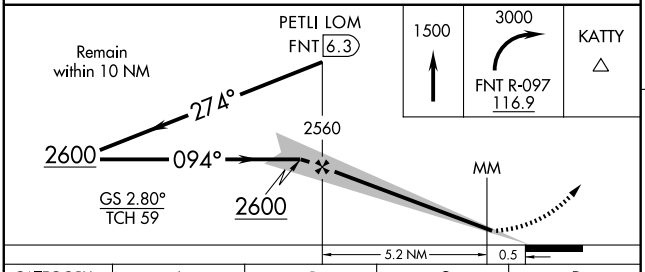
MALSR

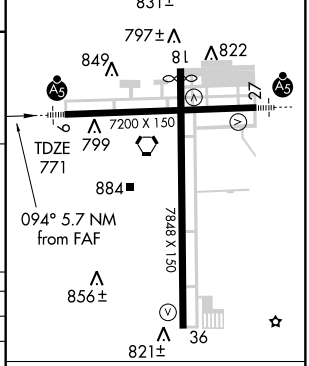
MISSED APPROACH: Climb to 1500, then climbing right turn to 3000 via FNT R-097 to KATTY INT/FNT 10.3 DME and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.





CATEGORY	A	B	C	D
S-ILS 9	971/24 200 (200-½)			
S-LOC 9	1180/24 409 (400-½)		1180/40 409 (400-¾)	
CIRCLING	1280 - 1 498 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340-2 558 (600-2)

FAF to MAP 5.7 NM

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-TUN	APP CRS	Rwy ldg 7200
109.9	274°	TDZE 770
		Apt Elev 782

ILS RWY 27

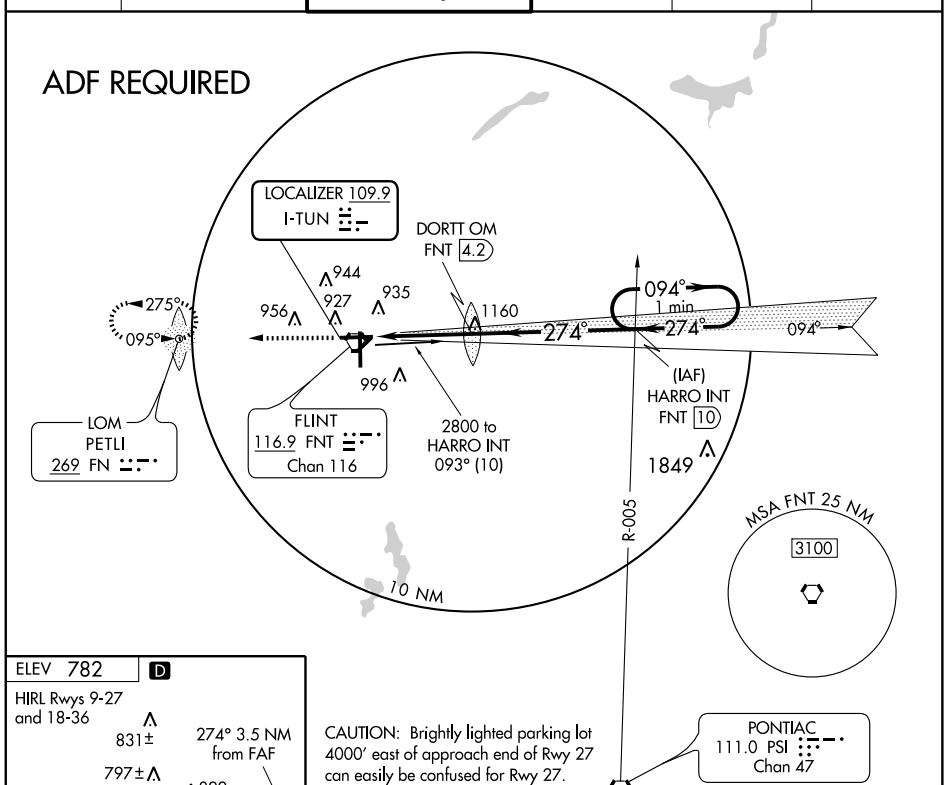
FLINT / BISHOP INTL (FNT)

ASR

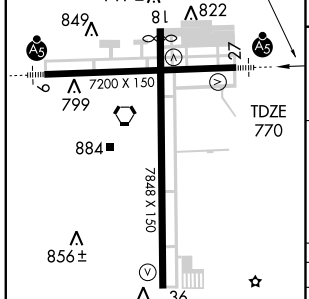
MALSR

MISSED APPROACH: Climb to 2800 direct FN LOM and hold.

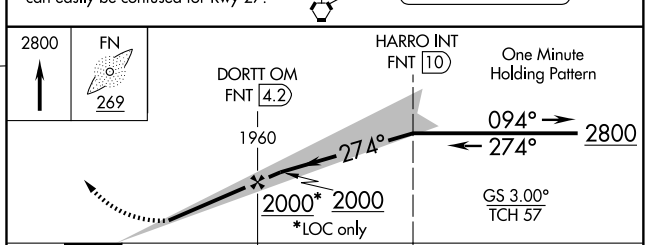
ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.



FAF to MAP 3.5 NM					
Knots	60	90	120	150	180
Min:Sec	3:30	2:20	1:45	1:24	1:10



CATEGORY	A	B	C	D
S-ILS 27	970-½ 200 (200-½)			
S-LOC 27	1260-½ 490 (500-½)		1260-¾ 490 (500-¾)	1260-1 490 (500-1)
CIRCLING	1280-1 498 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1340-2 558 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 45714 W09A	APP CRS 094°	Rwy ldg 7200 TDZE 771 Apt Elev 782

RNAV (GPS) RWY 9

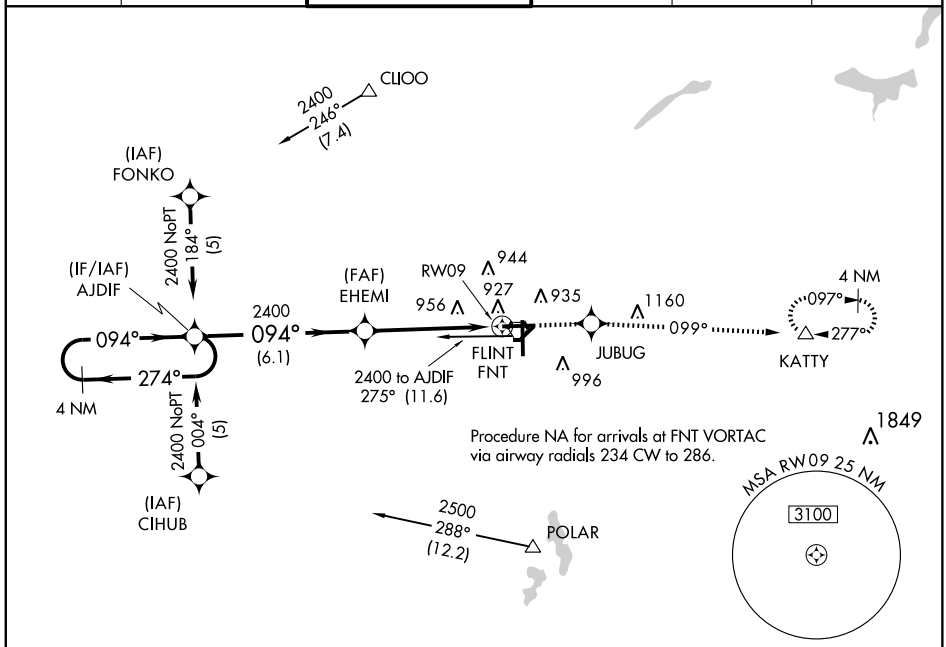
FLINT / BISHOP INTL (FNT)

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA.

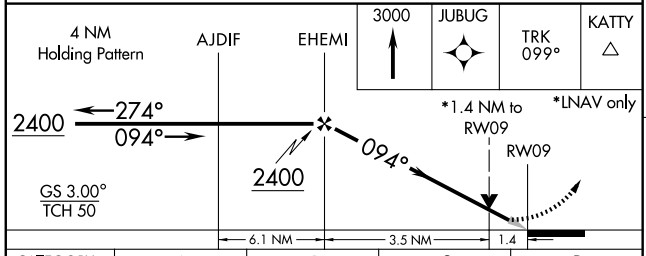
MALSR

MISSED APPROACH: Climb to 3000 direct JUBUG and via track 099° to KATTY and hold.

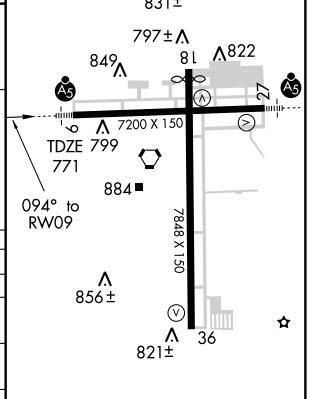
ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000' east of approach end of Rwy 27 can easily be confused for Rwy 27.



CATEGORY	A	B	C	D
LPV DA	971/24 200 (200-½)			
LNAV/VNAV DA	1227/50 456 (500-1)			
LNAV MDA	1260/24 489 (500-½)		1260/40 489 (500-¾)	1260/50 489 (500-1)
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)



EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 99514 W18A	APP CRS 185°	Rwy ldg 7648 TDZE 776 Apt Elev 782

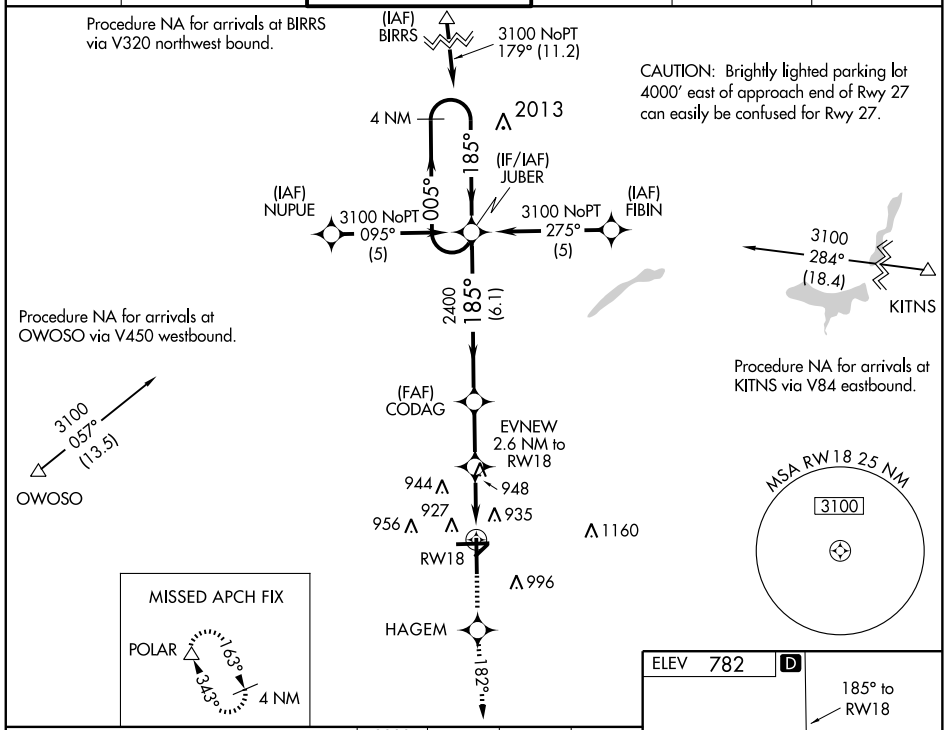
RNAV (GPS) RWY 18

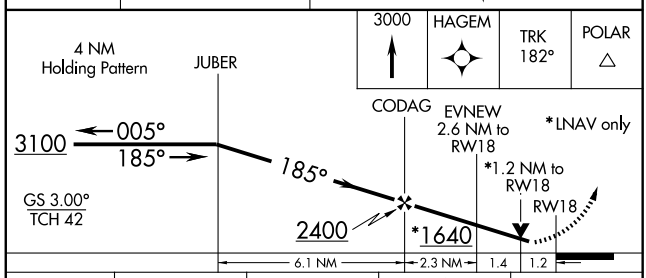
FLINT / BISHOP INTL (FNT)

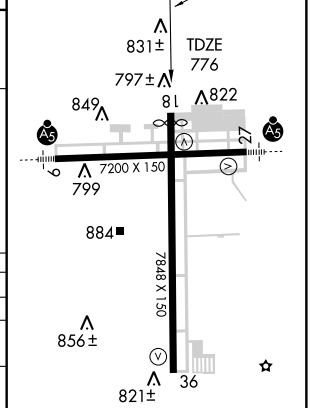
ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct HAGEM and via track 182° to POLAR and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95







CATEGORY	A	B	C	D
LPV DA	1109-1¼ 333 (400-1¼)			
LNAV/VNAV DA	1253-1¾ 477 (500-1¾)			
LNAV MDA	1200-1 424 (500-1)		1200-1¼ 424 (500-1¼)	
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)

HIRL Rwy 9-27 and 18-36

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 72810 W27A	APP CRS 274°	Rwy ldg 7200 TDZE 770 Apt Elev 782

RNAV (GPS) RWY 27

FLINT / BISHOP INTL (FNT)

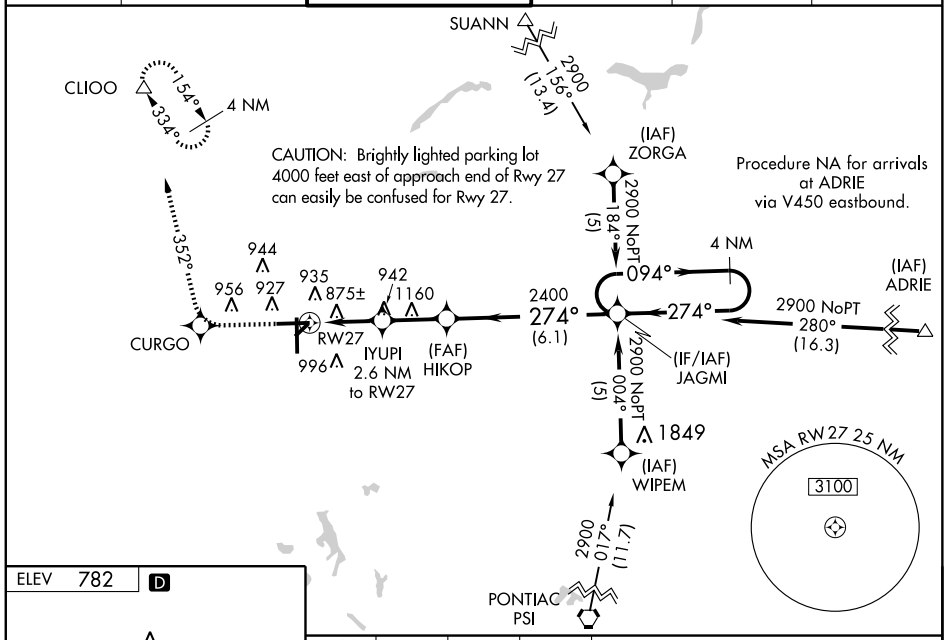
ASR

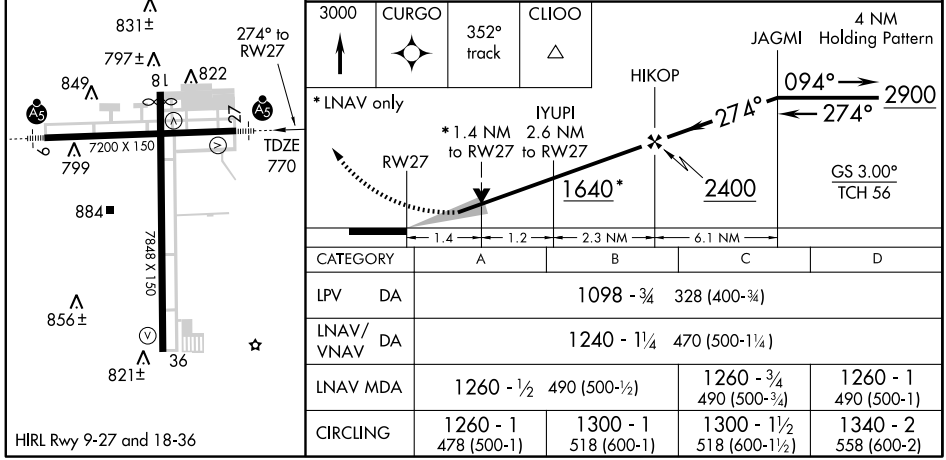
When local altimeter setting not received, use Owosso altimeter setting and increase all DA 47 feet, and all MDA 60 feet; and LNAV visibilities Cat C/D ¼ mile. VDP NA when using Owosso altimeter setting. Baro-VNAV NA when using Owosso altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). For inoperative MALSR, increase LPV all Cats visibility to 1¼. DME/DME RNP-0.3 NA.

MALSR

MISSED APPROACH: Climb to 3000 direct CURGO and via 352° track to CLIOO and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95





CATEGORY	A	B	C	D
LPV DA	1098 - ¾ 328 (400-¾)			
LNAV/VNAV DA	1240 - 1¼ 470 (500-1¼)			
LNAV MDA	1260 - ½ 490 (500-½)		1260 - ¾ 490 (500-¾)	1260 - 1 490 (500-1)
CIRCLING	1260 - 1 478 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340 - 2 558 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

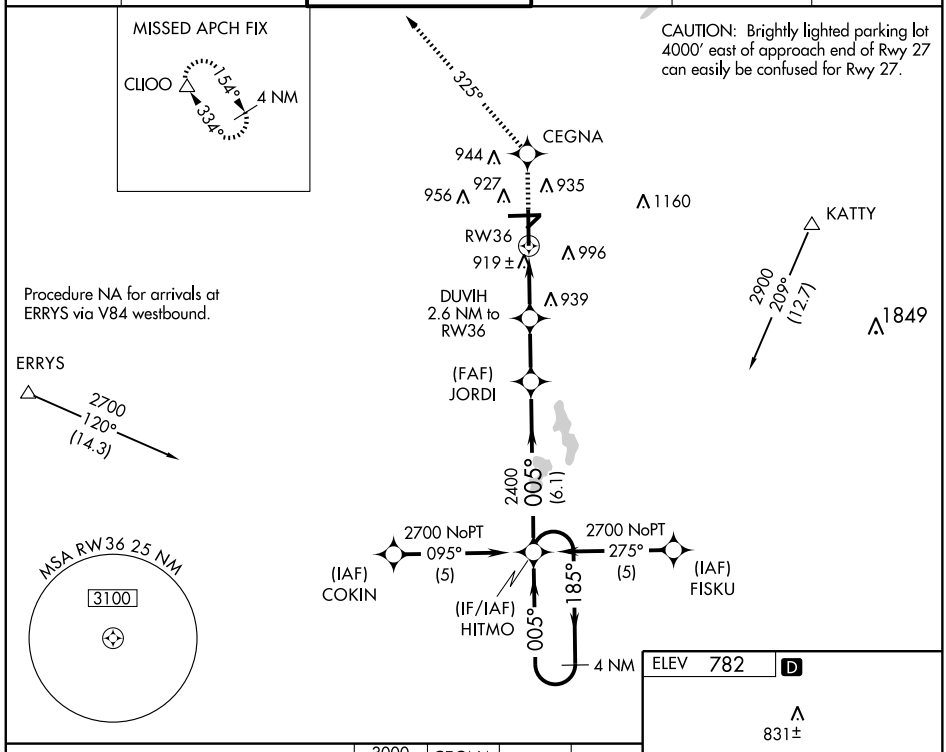
RNAV (GPS) RWY 36
FLINT / BISHOP INTL (FNT)

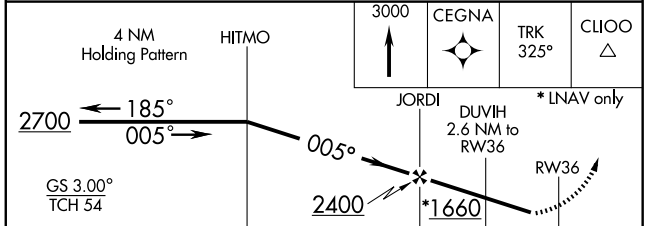
WAAS CH 65914 W36A	APP CRS 005°	Rwy ldg 7848 TDZE 782 Apt Elev 782

ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA.

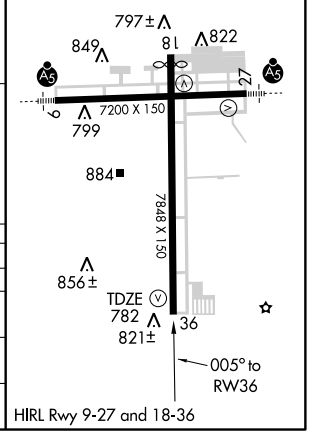
MISSED APPROACH: Climb to 3000 direct CEGNA and via track 325° to CLIOO and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95





CATEGORY	A	B	C	D
LPV DA	1123-1¼ 341 (400-1¼)			
LNAV/VNAV DA	1254-1¾ 472 (500-1¾)			
LNAV MDA	1260-1 478 (500-1)		1260-1¼ 478 (500-1¼)	1260-1½ 478 (500-1½)
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)



EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 102°	Rwy ldg 7200 TDZE 771 Apt Elev 782

VOR RWY 9

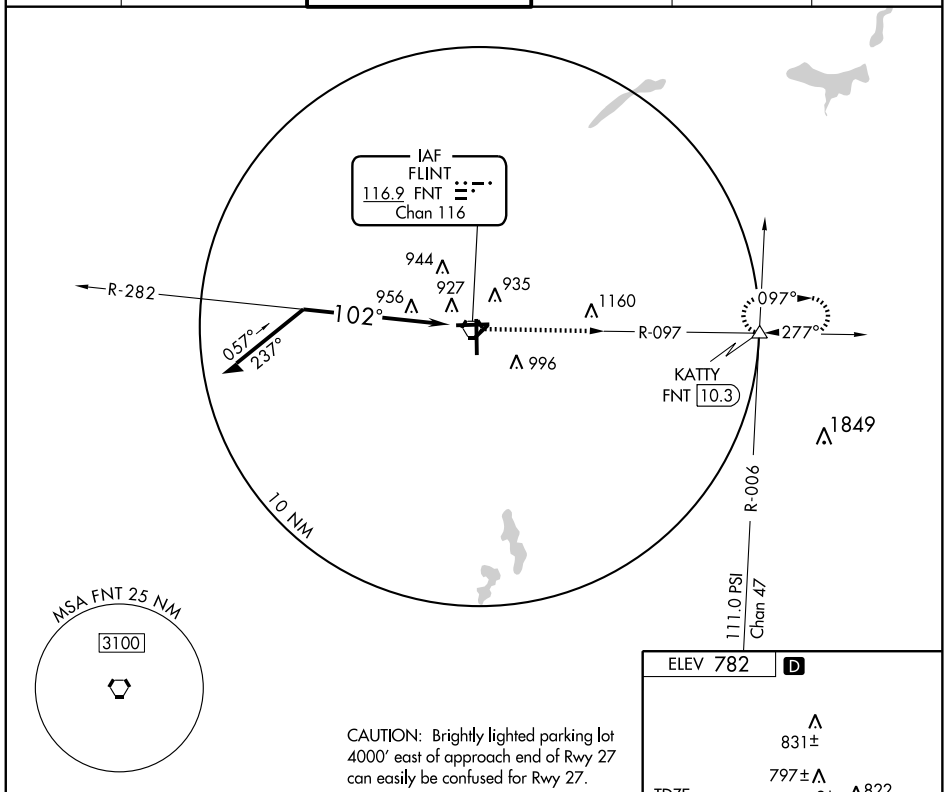
FLINT / BISHOP INTL (FNT)

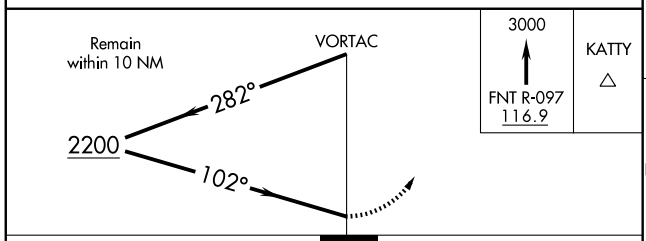
ASR

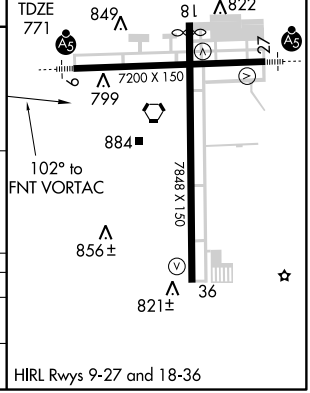
MALSR

MISSED APPROACH: Climb to 3000 via FNT R-097 to KATTY INT/FNT 10.3 DME and hold.

ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-9	1300/24 529 (500-½)		1300/50 529 (600-1)	1300/60 529 (600-1¼)
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 196°	Rwy ldg 7648 TDZE 779 Apt Elev 782

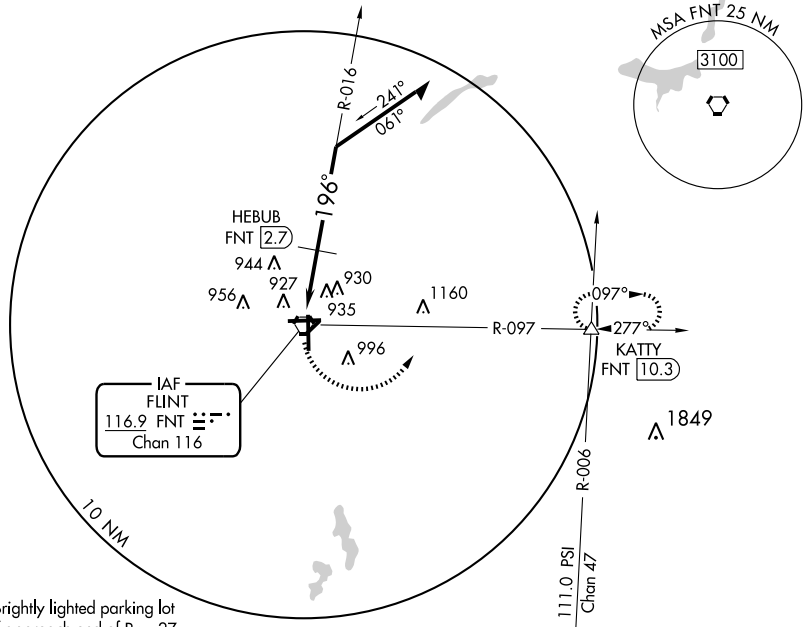
VOR RWY 18

FLINT / BISHOP INTL (FNT)

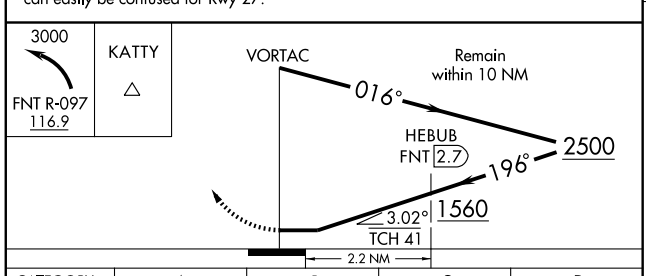
ASR

MISSED APPROACH: Climbing left turn to 3000 via FNT R-097 to KATTY INT and hold.

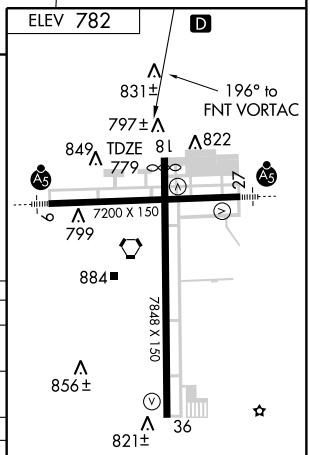
ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.



CATEGORY	A	B	C	D
S-18	1560 - 1 781 (800-1)	1560 - 1¼ 781 (800-1¼)	1560 - 2¼ 781 (800-2¼)	1560 - 2½ 781 (800-2½)
CIRCLING	1560 - 1 778 (800-1)	1560 - 1¼ 778 (800-1¼)	1560 - 2¼ 778 (800-2¼)	1560 - 2½ 778 (800-2½)
DME MINIMUMS				
S-18	1300 - 1 523 (600-1)		1300-1½ 523 (600-1½)	1300-1¾ 523 (600-1¾)
CIRCLING	1300 - 1 518 (600-1)	1300 - 1 518 (600-1)	1300-1½ 518 (600-1½)	1340-2 558 (600-2)



HIRL Rwys 9-27 and 18-36

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 267°	Rwy ldg 7200 TDZE 770 Apt Elev 782

VOR RWY 27

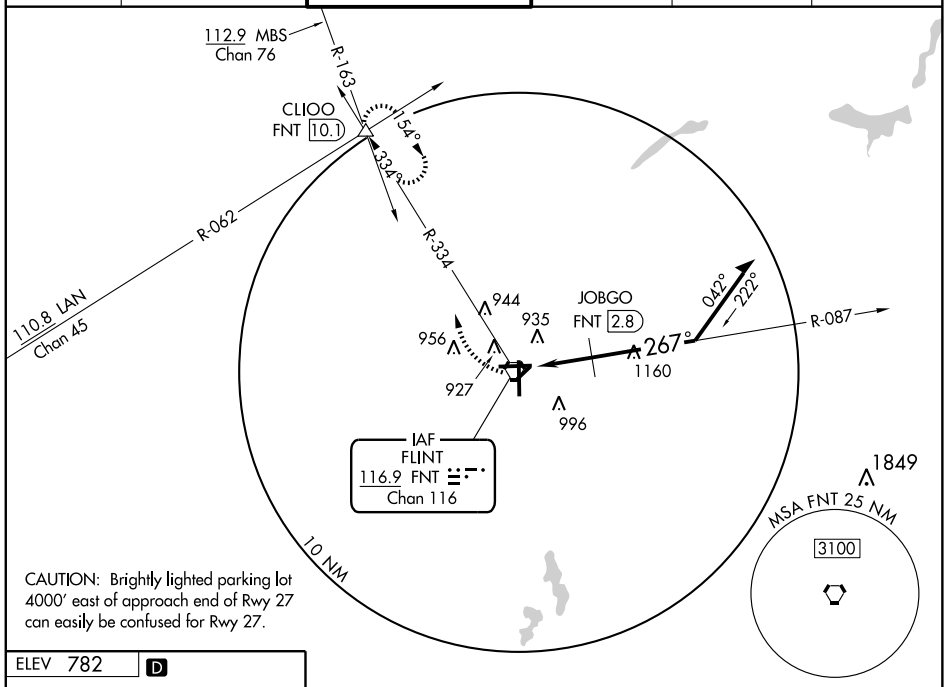
FLINT / BISHOP INTL (FNT)

ASR

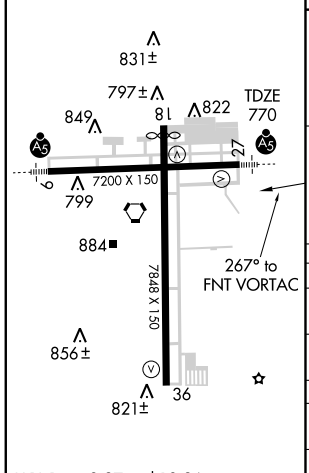
MALSR

MISSED APPROACH: Climbing right turn to 3000 via FNT R-334 to CLIOO INT and hold.

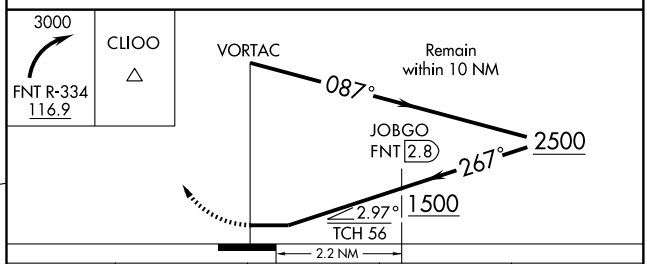
ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.



HIRL Rwys 9-27 and 18-36



CATEGORY	A	B	C	D
S-27	1500 - ½ 730 (800-½)		1500 - 1½ 730 (800-1½)	1500 - 1¾ 730 (800-1¾)
CIRCLING	1500 - 1 718 (800-1)		1500 - 2 718 (800-2)	1500 - 2¼ 718 (800-2¼)
DME MINIMUMS				
S-27	1260 -½ 490 (500-½)		1260 - ¾ 490 (500-¾)	1260 - 1 490 (500-1)
CIRCLING	1280 - 1 498 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340-2 558 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 359°	Rwy ldg 7848 TDZE 782 Apt Elev 782

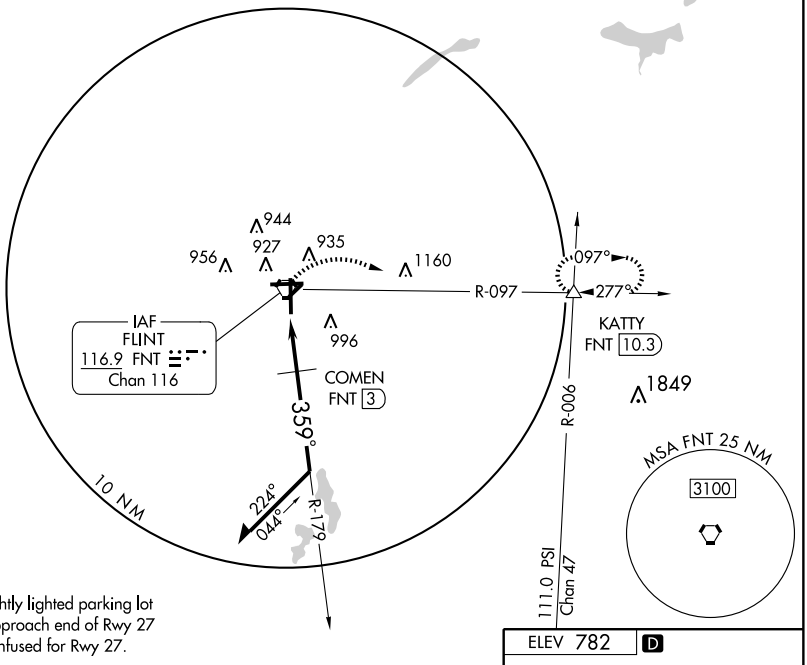
VOR RWY 36

FLINT / BISHOP INTL (FNT)

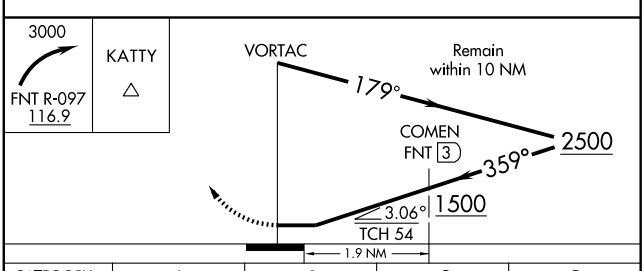
ASR

MISSED APPROACH: Climbing right turn to 3000 via FNT R-097 to KATTY INT/10.3 DME and hold.

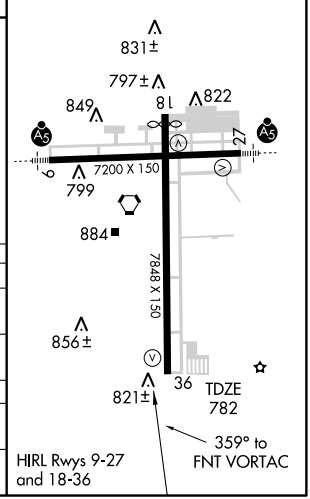
ATIS	FLINT APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.



CATEGORY	A	B	C	D
S-36	1500 - 1 718 (800-1)		1500 - 2 718 (800-2)	1500 - 2¼ 718 (800-2¼)
CIRCLING	1500 - 1 718 (800-1)		1500 - 2 718 (800-2)	1500 - 2¼ 718 (800-2¼)
DME MINIMUMS				
S-36	1200 - 1 418 (500-1)		1200-1¼ 418 (500-1¼)	
CIRCLING	1280 - 1 498 (500-1)	1300 - 1 518 (600-1)	1300 - 1½ 518 (600-1½)	1340-2 558 (600-2)



EC-1. 14 JAN 2010 to 11 FEB 2010

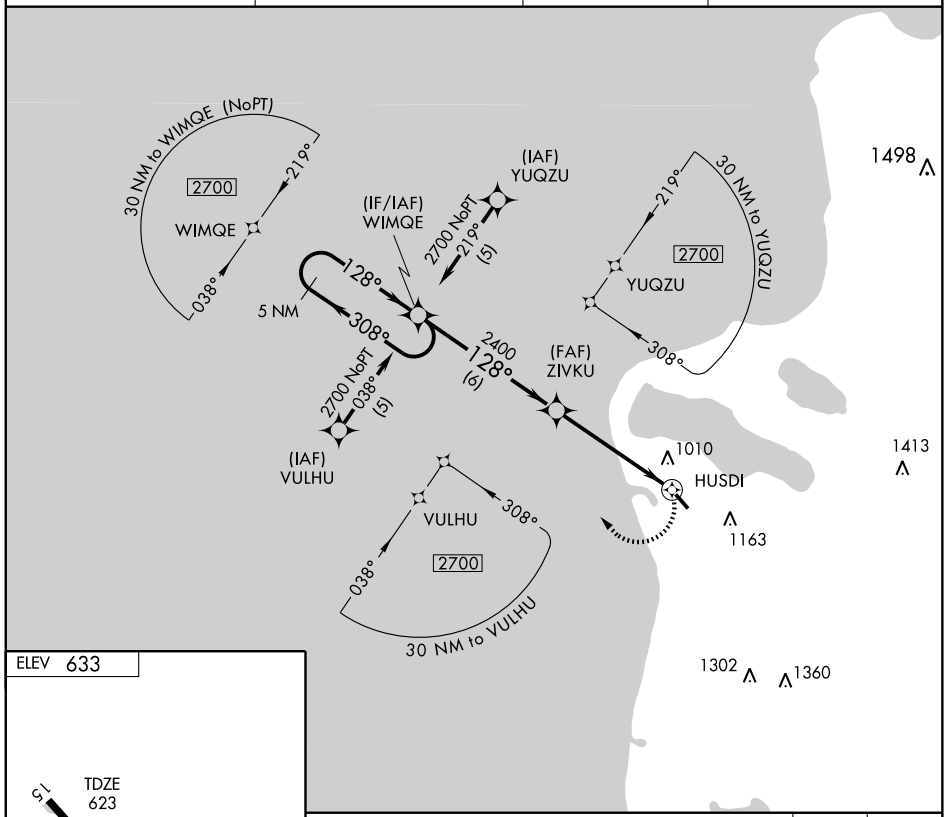
APP CRS	Rwy ldg	2956
128°	TDZE	623
	Apt Elev	633

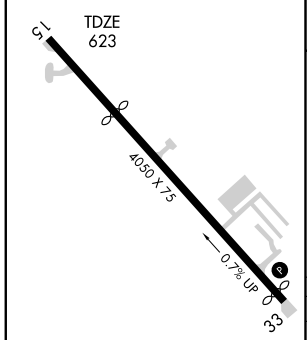
RNAV (GPS) RWY 15
FRANKFORT DOW MEMORIAL FIELD (FKS)

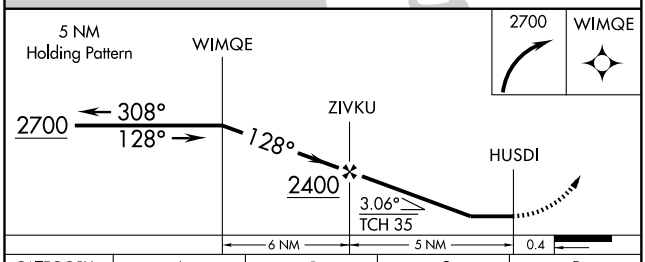
If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climbing right turn to 2700 direct WIMQE and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
118.325	132.9 338.3	121.725	123.05 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1220-1 597 (600-1)		1220-1½ 597 (600-1½)	NA
CIRCLING	1320-1 687 (700-1)		1520-2¾ 887 (900-2¾)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

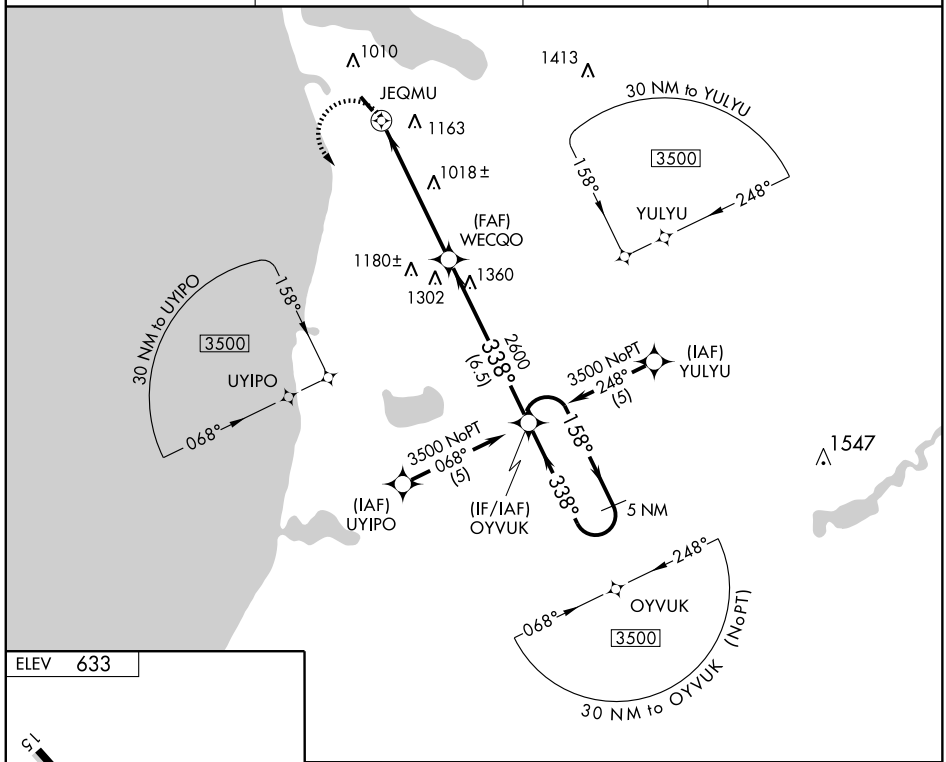
APP CRS	Rwy ldg	3939
338°	TDZE	606
	Apt Elev	633

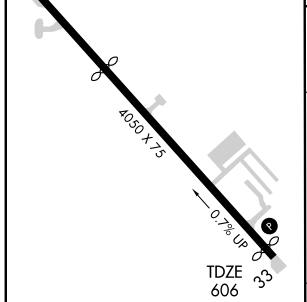
RNAV (GPS) RWY 33
FRANKFORT DOW MEMORIAL FIELD (FKS)

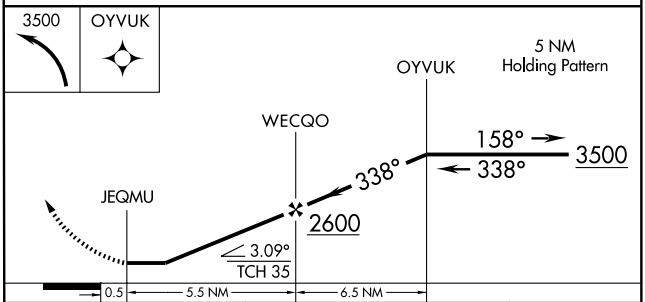
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet. Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing left turn to 3500 direct OYVUK and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
118.325	132.9 338.3	121.725	123.05 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1320-1 714 (800-1)		1320-2 714 (700-2)	NA
CIRCLING	1320-1 687 (700-1)		1520-2¾ 887 (900-2¾)	NA

MIRL Rwy 15-33 L
REIL Rwy 33 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBL	APP CRS	Rwy ldg	N/A
111.4	011°	TDZE	N/A
Chan 51		Apt Elev	633

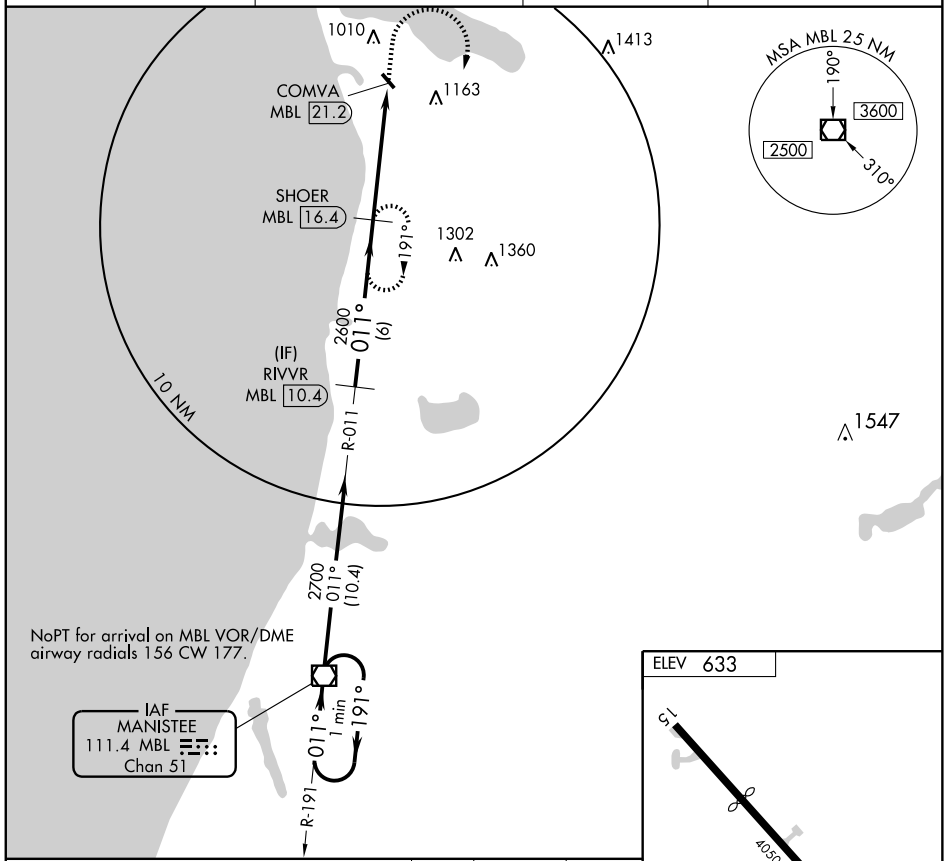
VOR/DME-A

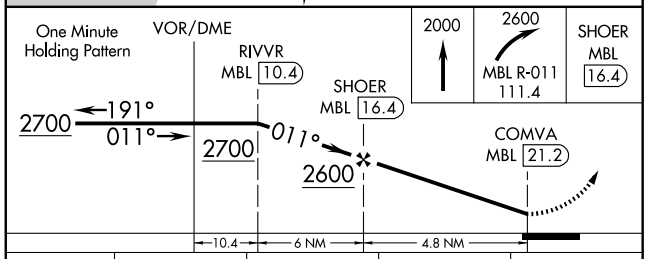
FRANKFORT DOW MEMORIAL FIELD (FKS)

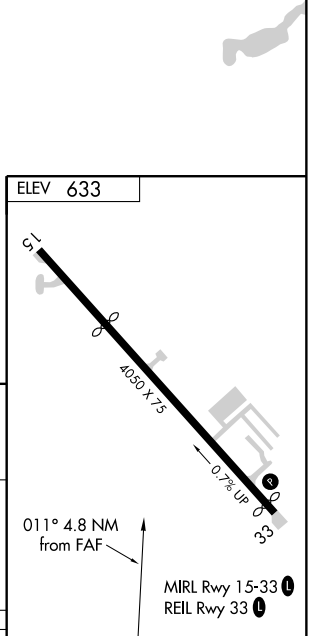
If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet.

MISSED APPROACH: Climb to 2000, then climbing right turn to 2600 via MBL R-011 to SHOER/MBL 16.4 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
118.325	132.9 338.3	121.725	123.05 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	1480-1 847 (900-1)	1480-1¼ 847 (900-1¼)	1520-2¾ 887 (900-2¾)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

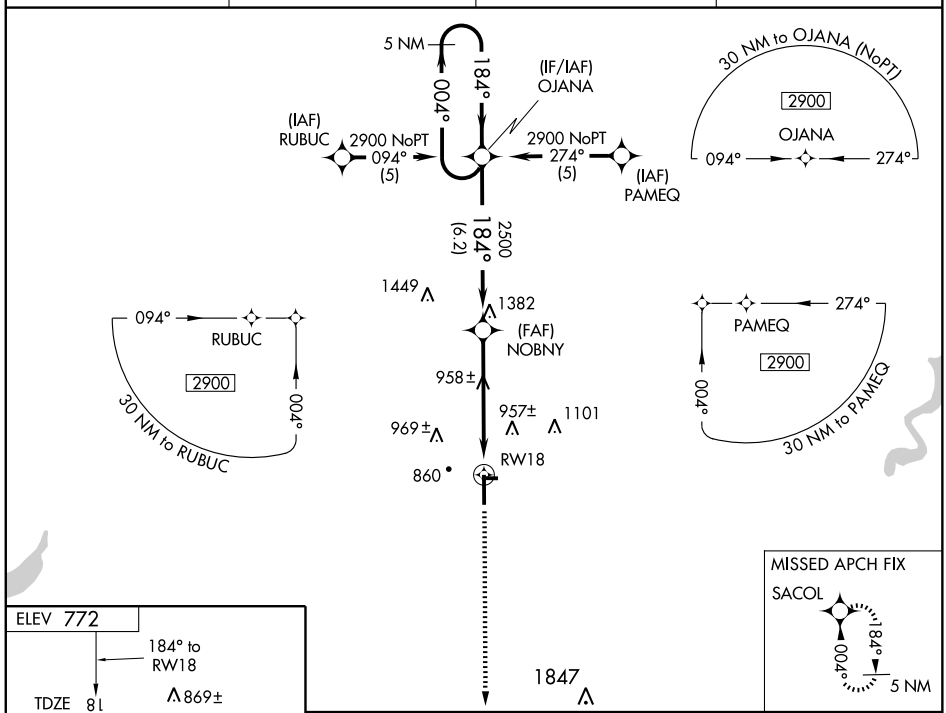
WAAS Chan **82405** **W18A**	APP CRS **184°**	Rwy ldg **6498** TDZE **770** Apt Elev **772**

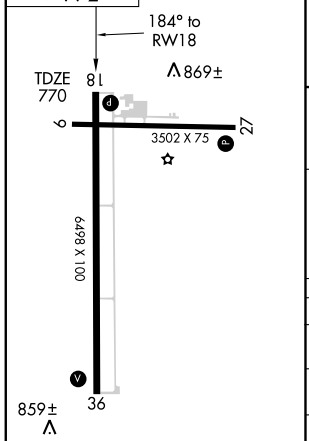
RNAV (GPS) RWY 18
FREMONT MUNI (FFX)

When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities ¼ mile, increase all MDA 80 feet, and Cat C/D visibilities ¼ mile. VDP NA when using Muskegon altimeter setting. Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

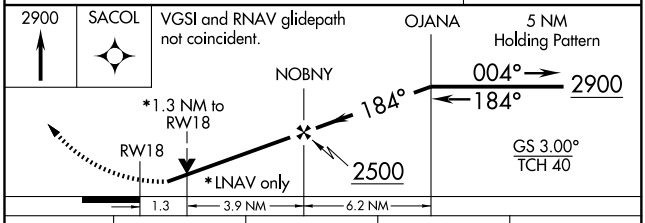
MISSED APPROACH: Climb to 2900 direct SACOL and hold.

AWOS-3	MUSKEGON APP CON ★	CLNC DEL	UNICOM
118.775	**119.8 339.1**	**118.25**	**123.0** (CTAF) L





REIL Rwys 18 and 36 L
MIRL Rwys 9-27 and 18-36 L



CATEGORY	A	B	C	D
LPV DA	1075-1 305 (400-1)			
LNAV/VNAV DA	1169-1½ 399 (400-1½)			
LNAV MDA	1220-1 450 (500-1)		1220-1¼ 450 (500-1¼)	1220-1½ 450 (500-1½)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)

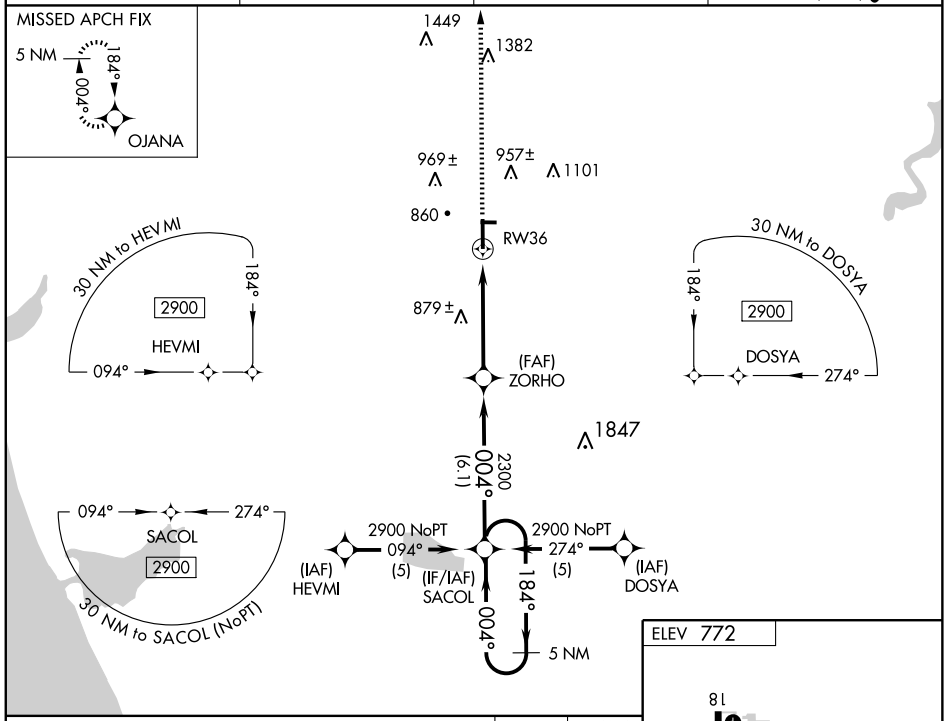
WAAS Chan **56505** **W36A**	APP CRS **004°**	Rwy ldg **6498** TDZE **760** Apt Elev **772**

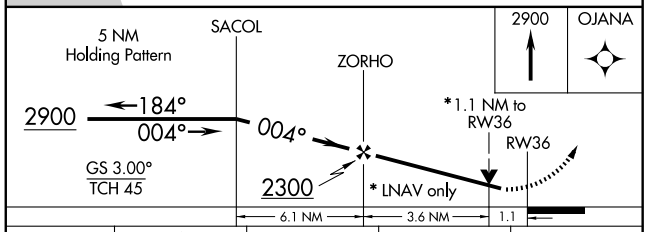
RNAV (GPS) RWY 36
FREMONT MUNI (FFX)

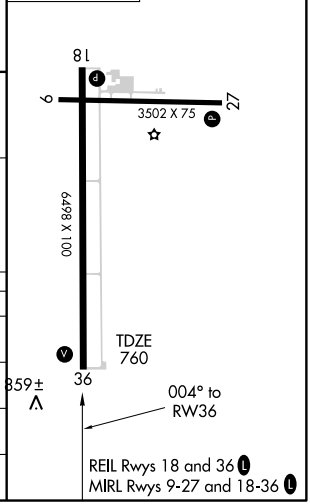
When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities ¼ mile, increase all MDA 80 feet, and Cat C/D visibilities ¼ mile. VDP NA when using Muskegon altimeter setting. Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2900 direct OJANA and hold.

AWOS-3	MUSKEGON APP CON ★		CLNC DEL	UNICOM
118.775	**119.8**	**339.1**	**118.25**	**123.0** (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1036-1 276 (300-1)			
LNAV/VNAV DA	1129-1¼ 369 (400-1¼)			
LNAV MDA	1140-1 380 (400-1)			1140-1¼ 380 (400-1¼)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)

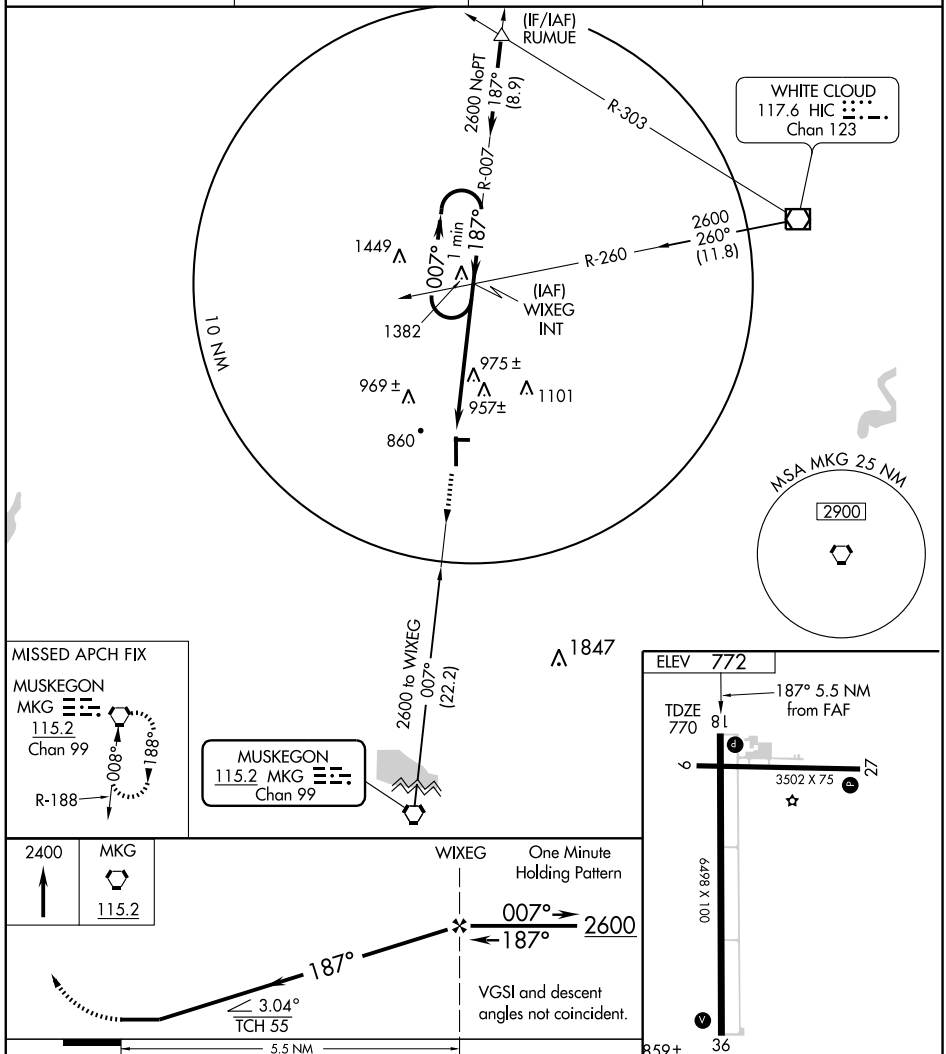
VOR RWY 18
FREMONT MUNI (FFX)

VORTAC MKG	APP CRS	Rwy ldg	6498
115.2	187°	TDZE	770
Chan 99		Apt Elev	772

Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon altimeter setting and increase all MDA 80 feet and increase S-18 Cat D visibility ¼ mile.

MISSED APPROACH: Climb to 2400 direct MKG VORTAC and hold.

AWOS-3	MUSKEGON APP CON ★		CLNC DEL	UNICOM
118.775	119.8	339.1	118.25	123.0 (CTAF) L



CATEGORY	A	B	C	D
S-18	1280-1 510 (600-1)		1280-1½ 510 (600-1½)	
CIRCLING	1280-1 508 (600-1)		1280-1½ 508 (600-1½)	1340-2 568 (600-2)

FAF to MAP 5.5 NM

Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

EC-1. 14 JAN 2010 to 11 FEB 2010

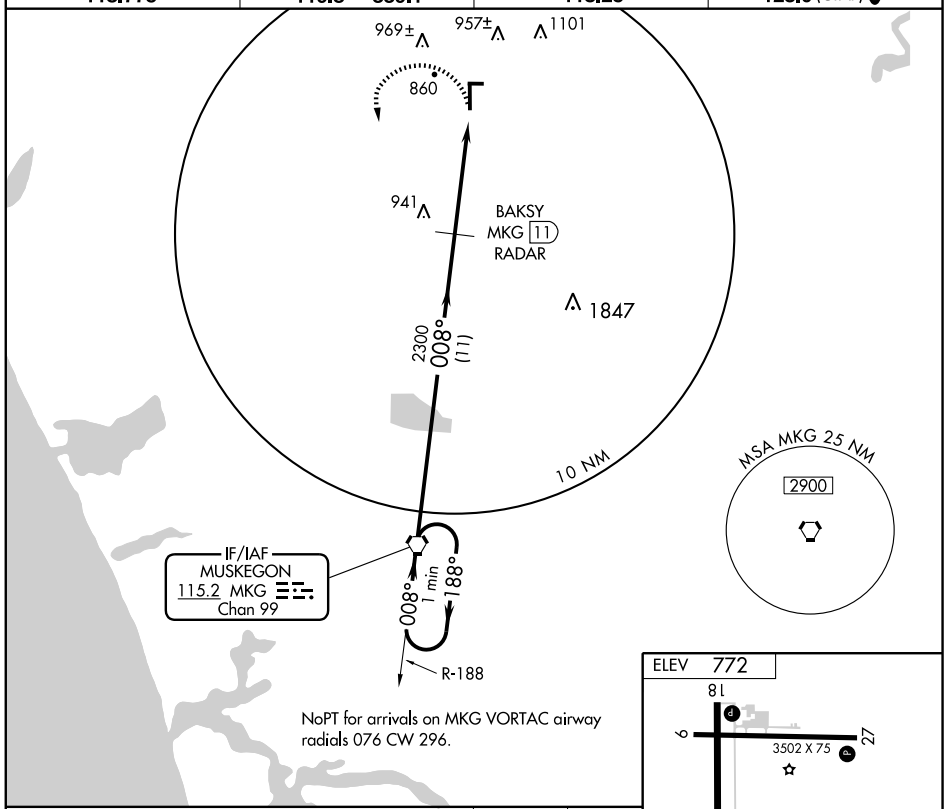
VOR RWY 36
FREMONT MUNI (FFX)

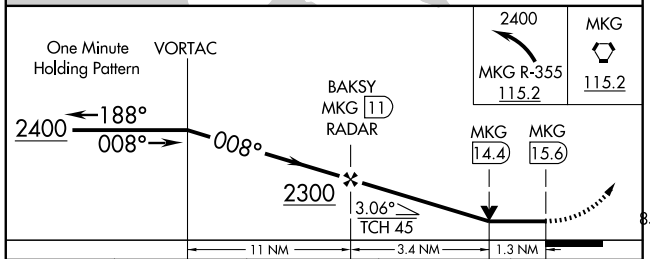
VORTAC MKG	APP CRS	Rwy ldg	6498
115.2	008°	TDZE	760
Chan 99		Apt Elev	772

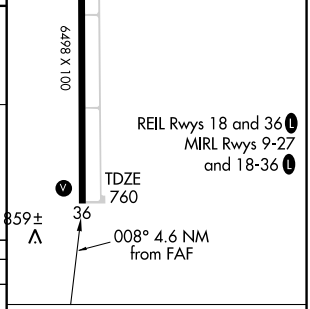
DME or RADAR required. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon altimeter setting and increase all S-36 MDA 80 feet, and Circling Cats A/B/C MDA 80 feet; increase S-36 Cat D visibility ¼ mile. VDP NA when using Muskegon altimeter setting.

MISSED APPROACH: Climbing left turn to 2400 via MKG VORTAC R-355 to MKG VORTAC and hold.

AWOS-3	MUSKEGON APP CON ★		CLNC DEL	UNICOM
118.775	119.8	339.1	118.25	123.0 (CTAF) L







CATEGORY	A	B	C	D
S-36	1200-1 440 (500-1)		1200-1¼ 440 (500-1¼)	1200-1½ 440 (500-1½)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)

FAF to MAP 4.6 NM

Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

EC-1. 14 JAN 2010 to 11 FEB 2010

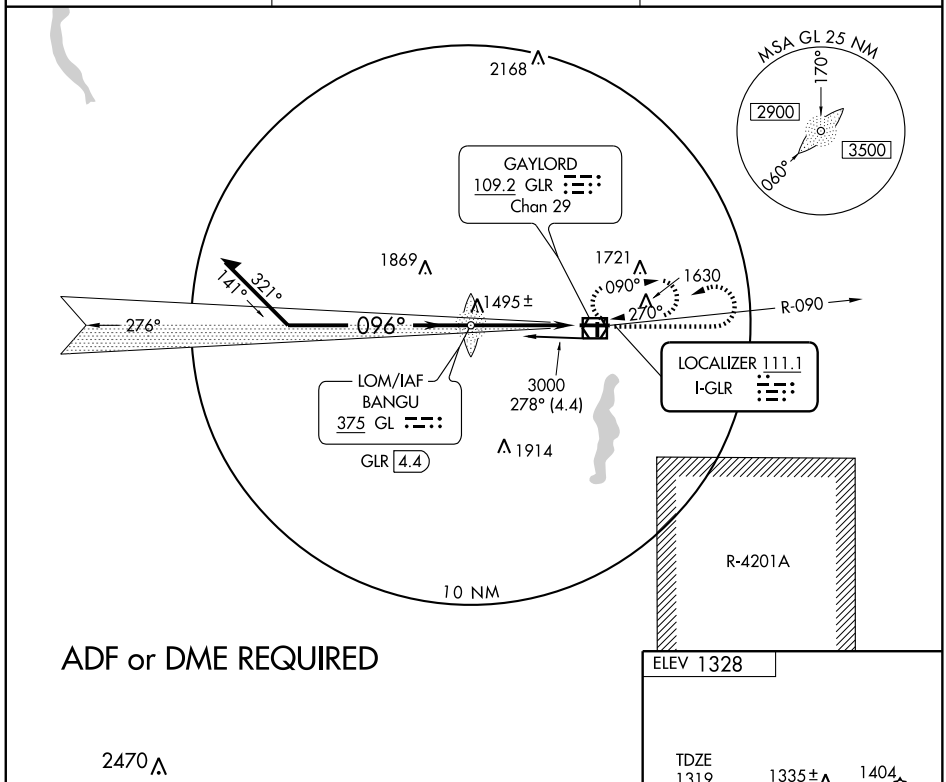
LOC I-GLR	APP CRS	Rwy ldg	6578
111.1	096°	TDZE	1319
		Apt Elev	1328

ILS RWY 9
GAYLORD RGNL (GLR)

MALSR

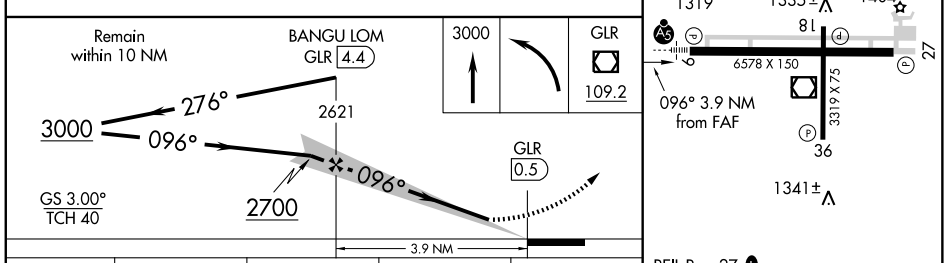
MISSED APPROACH: Climb to 3000 then left turn direct GLR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L



ADF or DME REQUIRED

ELEV 1328



REIL Rwy 27 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

CATEGORY	A	B	C	D
S-ILS 9	1519-½ 200 (200-½)			
S-LOC 9	1700-½ 381 (400-½)			1700-¾ 381 (400-¾)
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

FAF to MAP 3.9 NM

Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM GL	APP CRS	Rwy ldg	6578
375	096°	TDZE	1319
		Apt Elev	1328

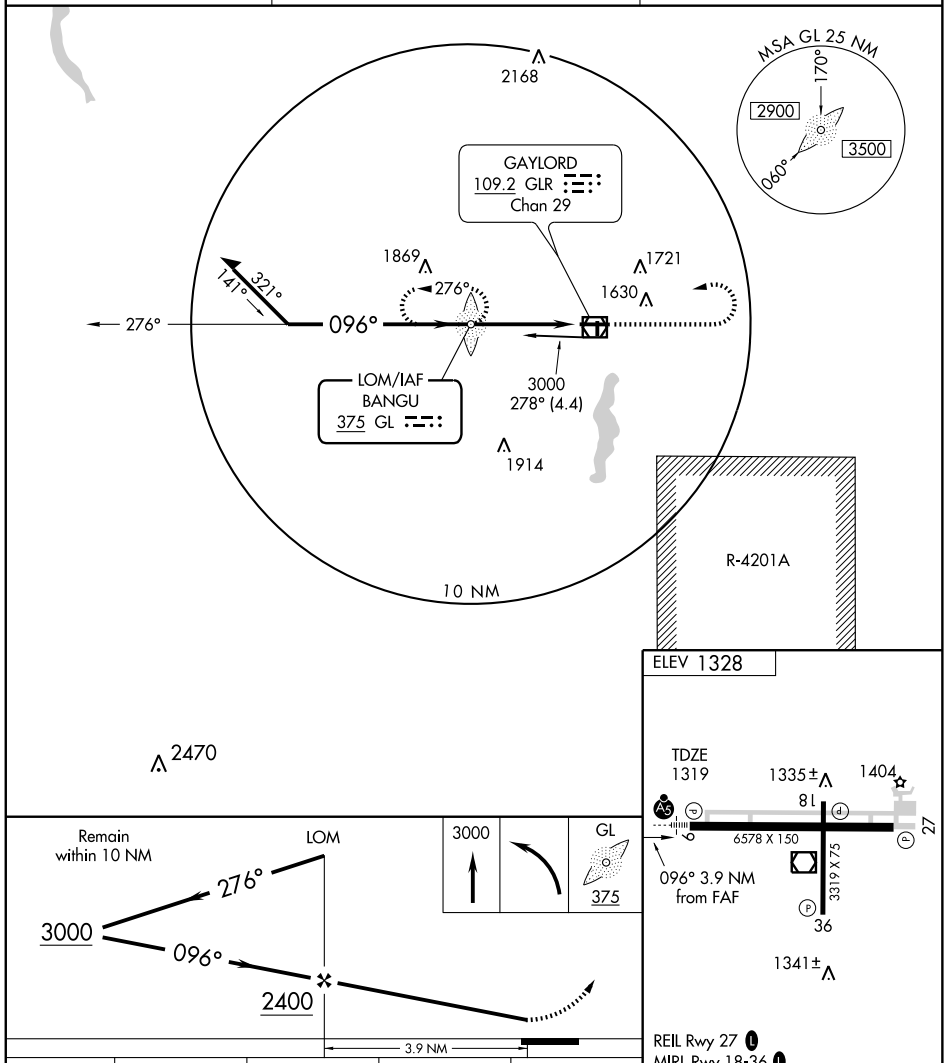
NDB RWY 9
GAYLORD RGNL (GLR)

NA

MALSR

MISSED APPROACH: Climb to 3000, then left turn direct GL LOM and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L



REIL Rwy 27 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

CATEGORY	A	B	C	D
S-9	1780-¾ 461 (500-¾)			1780-1¼ 461 (500-1¼)
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

VOR/DME GLR	APP CRS	Rwy ldg	6578
109.2	104°	TDZE	1319
Chan 29		Apt Elev	1328

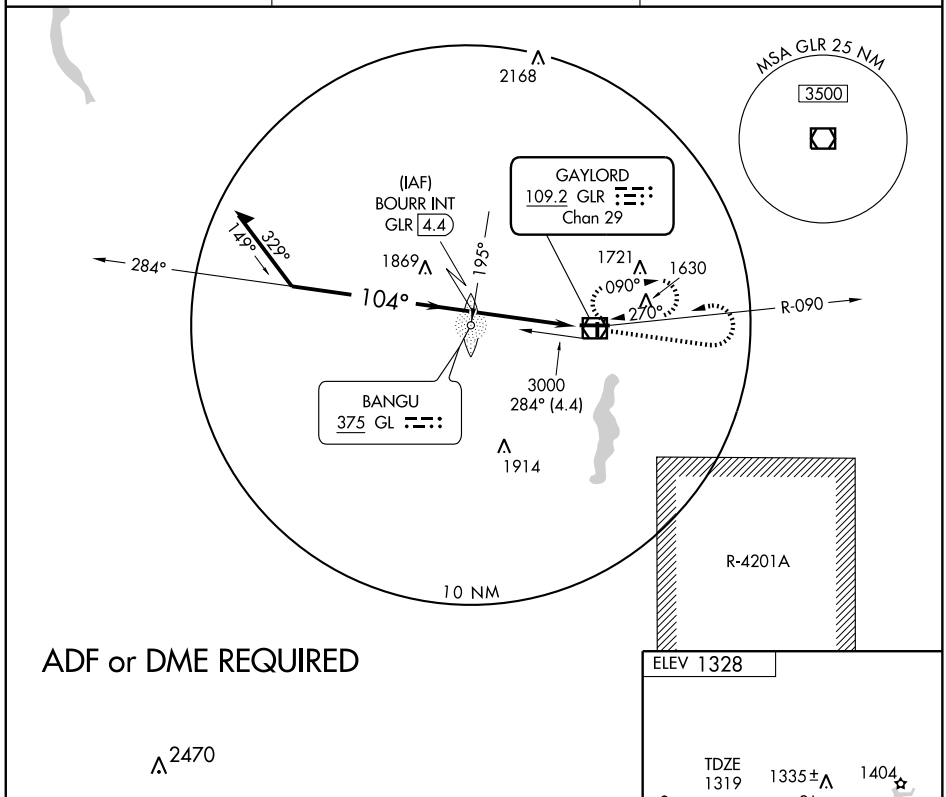
VOR or GPS RWY 9

GAYLORD RGNL (GLR)

MALSR

MISSED APPROACH: Climb to 3000, then left turn direct GLR VOR/DME and hold.

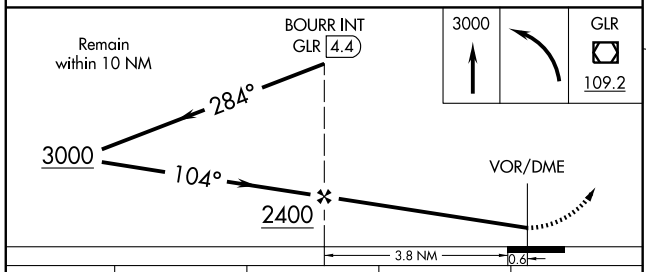
ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L

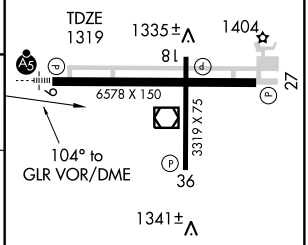


ADF or DME REQUIRED

2470

ELEV 1328





CATEGORY	A	B	C	D
S-9	1700-½ 381 (400-½)			1700-1 381 (400-1)
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 27 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

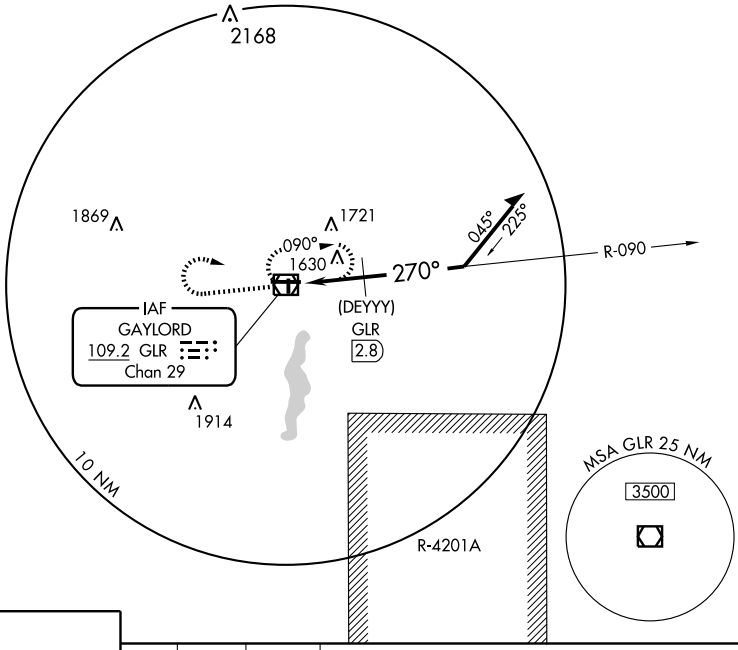
EC-1. 14 JAN 2010 to 11 FEB 2010

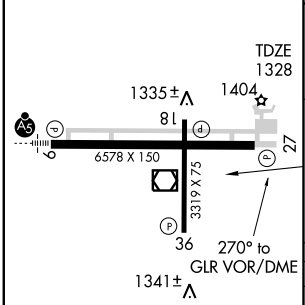
VOR/DME GLR 109.2 Chan 29	APP CRS 270°	Rwy ldg 6578 TDZE 1328 Apt Elev 1328

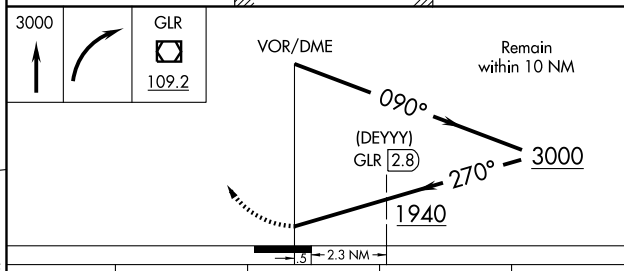
VOR or GPS RWY 27
GAYLORD RGNL (GLR)

MISSED APPROACH: Climb to 3000, then right turn direct GLR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-27	1940-1 612 (700-1)		1940-1¾ 612 (700-1¾)	1940-2 612 (700-2)
CIRCLING	1940-1 612 (700-1)		1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)
DME MINIMUMS				
S-27	1880-1 552 (600-1)		1880-1½ 552 (600-1½)	1880-1¾ 552 (600-1¾)
CIRCLING	1880-1 552 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 27 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB GDW	APP CRS	Rwy ldg	4700
209	265°	TDZE	773
		Apt Elev	776

NDB or GPS RWY 27

GLADWIN ZETTEL MEMORIAL (GDW)

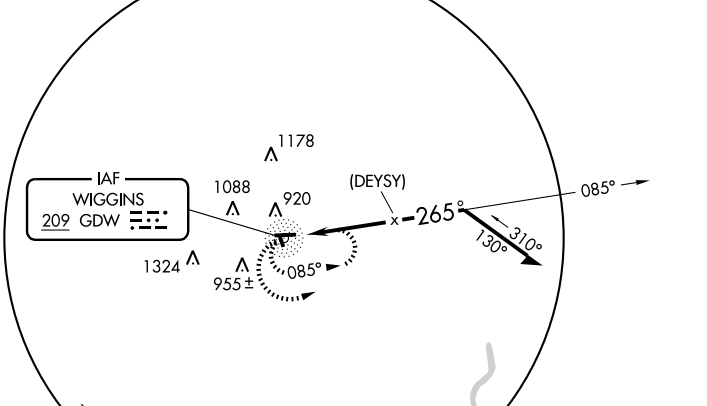
T
A NA

Use Saginaw, MI altimeter setting.

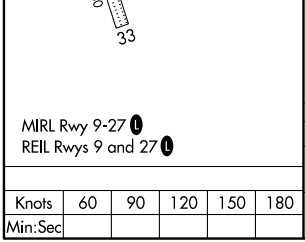
MISSED APPROACH: Climbing left turn to 2600 in GDW NDB holding pattern.

SAGINAW APP CON ★
126.45 236.625

UNICOM
122.8 (CTAF) L

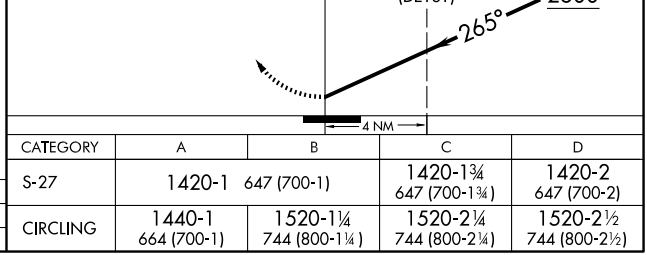


ELEV 776



MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

Knots	60	90	120	150	180
Min:Sec					



CATEGORY	A	B	C	D
S-27	1420-1 647 (700-1)		1420-1¾ 647 (700-1¾)	1420-2 647 (700-2)
CIRCLING	1440-1 664 (700-1)	1520-1¼ 744 (800-1¼)	1520-2¼ 744 (800-2¼)	1520-2½ 744 (800-2½)

APP CRS	Rwy ldg	3752
095°	TDZE	602
	Apt Elev	604

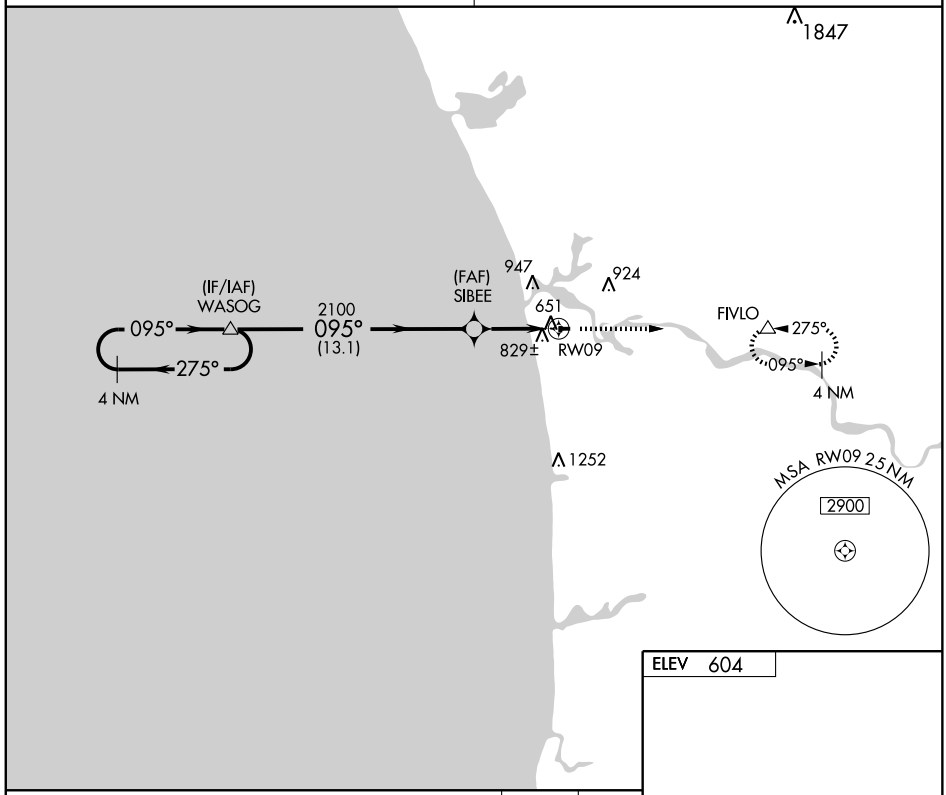
RNAV (GPS) RWY 9
GRAND HAVEN MEMORIAL AIRPARK (3GM)

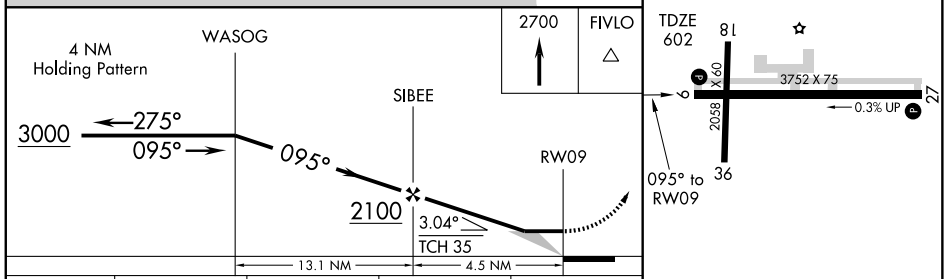
DME/DME RNP-0.3 NA.
Use Muskegon altimeter setting.
Circling NA at night to Rwys 18/36.
NA

MISSED APPROACH: Climb to 2700 direct FIVLO and hold.

MUSKEGON APP CON ★
119.8 339.1

UNICOM
122.7 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1120-1 518 (600-1)		1120-1½ 518 (600-1½)	NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3752
275°	TDZE	602
	Apt Elev	604

RNAV(GPS) RWY 27
GRAND HAVEN MEMORIAL AIRPARK (3GM)

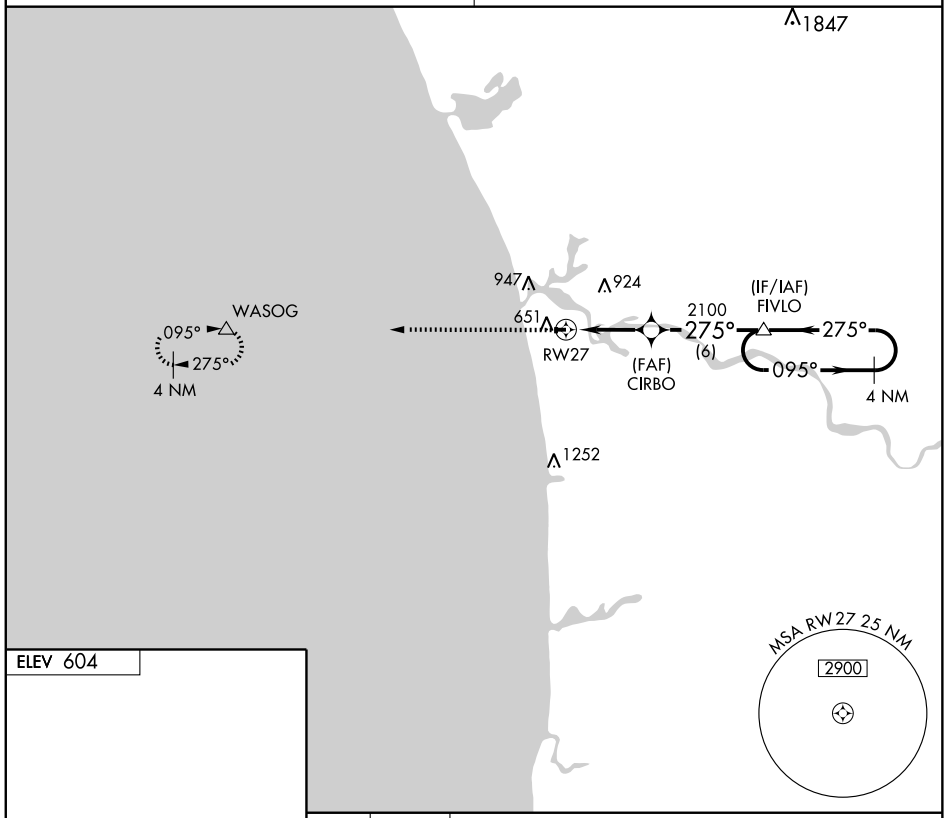
DME/DME RNP-0.3 NA.
Use Muskegon altimeter setting.
Circling NA at night rwys 18/36.

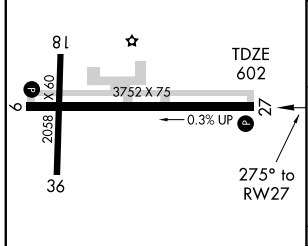
NA

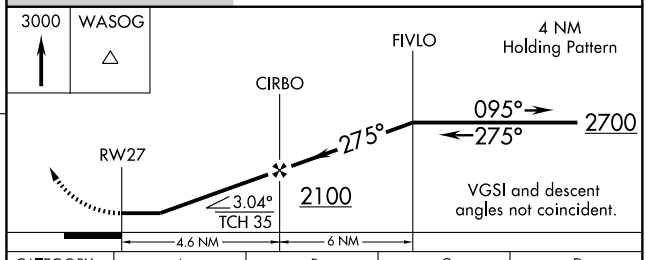
MISSED APPROACH: Climb to 3000 direct WASOG and hold.

MUSKEGON APP CON ★
119.8 339.1

UNICOM
122.7 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1000-1 398 (400-1)			NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC MKG	APP CRS	Rwy ldg	N/A
115.2	222°	TDZE	N/A
Chan 99		Apt Elev	604

VOR-A

GRAND HAVEN MEMORIAL AIRPARK (3GM)

Use Muskegon altimeter setting.
ADF, DME or RADAR REQUIRED

NA

MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

MUSKEGON APP CON ★
119.8 339.1

UNICOM
122.7 (CTAF) L

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

FAF to MAP 4.4 NM					
Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

CATEGORY	A	B	C	D
CIRCLING	1260-1 656 (700-1)		1260-1¾ 656 (700-1¾)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

COPTER VOR 345°

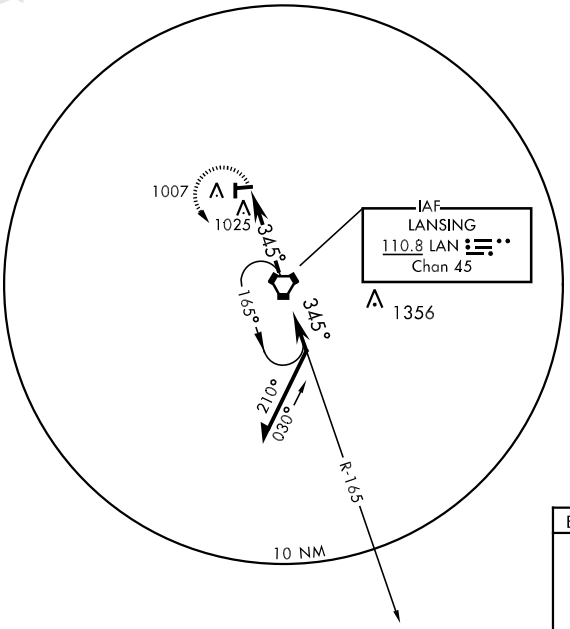
LAN VORTAC	APCH CRS	Rwy ldg	NA
110.8	345°	TDZE	NA
Chan 45		Arpt Elev	842

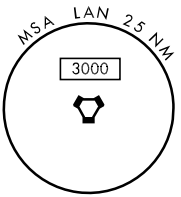
AL-6349 [USA] GRAND LEDGE/ ABRAMS MUNI (4D0)

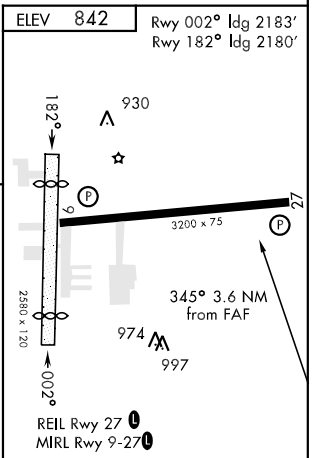
NA Use Lansing altimeter setting.

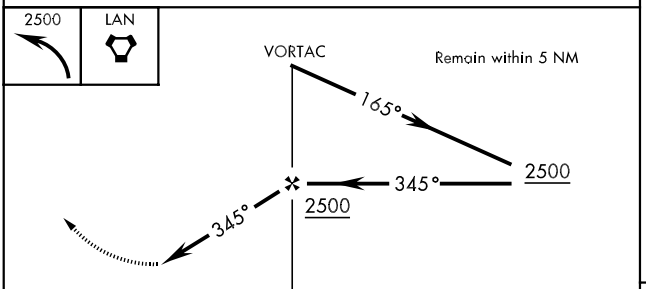
MISSED APPROACH: Climbing left turn to 2500 direct LAN VORTAC and hold.

LANSING APP CON	UNICOM (NG OPS)
118.65 226.4	122.7









FAF to MAP 3.6 NM					
Knots	45	60	75	90	105
Min:Sec	4:48	3:36	2:51	2:24	2:03

CATEGORY	COPTER
H-345°	1360-½ 518 (600-½)

EC-1, 14 JAN 2010 to 11 FEB 2010

VORTAC LAN	APP CRS	Rwy ldg	N/A
110.8	345°	TDZE	N/A
Chan 45		Apt Elev	842

VOR or GPS-A

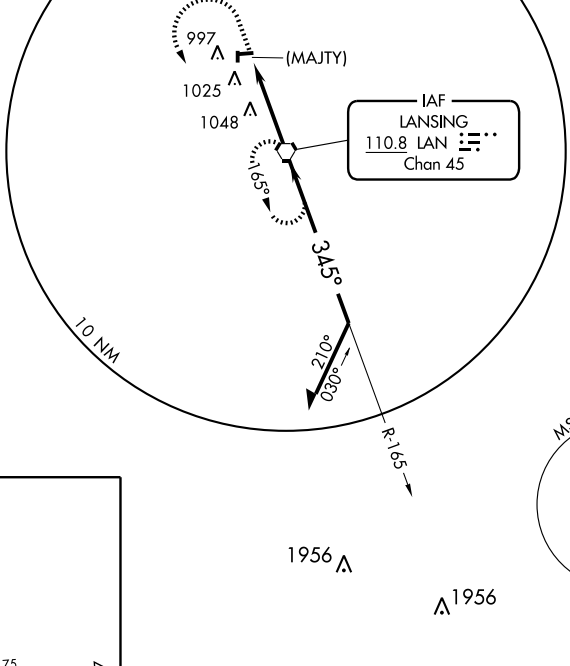
GRAND LEDGE / ABRAMS MUNI (4DØ)

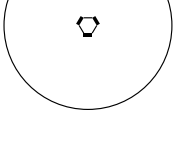
NA

Use Lansing altimeter setting.

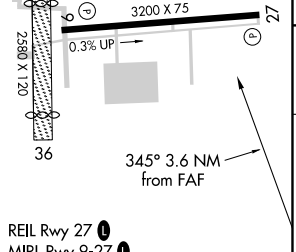
MISSED APPROACH: Climb to 2500, then turn left direct LAN VORTAC and hold.

LANSING APP CON	UNICOM
118.65 226.4	122.7 (CTAF) L

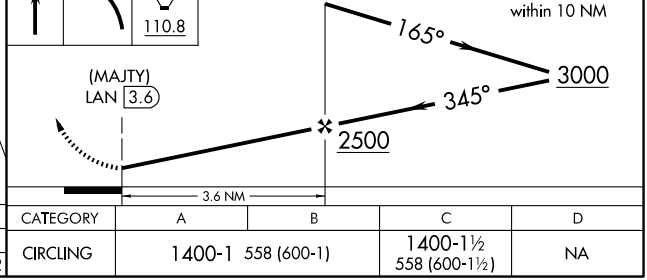




ELEV 842



REIL Rwy 27 L
MIRL Rwy 9-27 L



FAF to MAP 3.6 NM					
Knots	60	90	120	150	180
Min:Sec	3:36	2:24	1:48	1:26	1:12

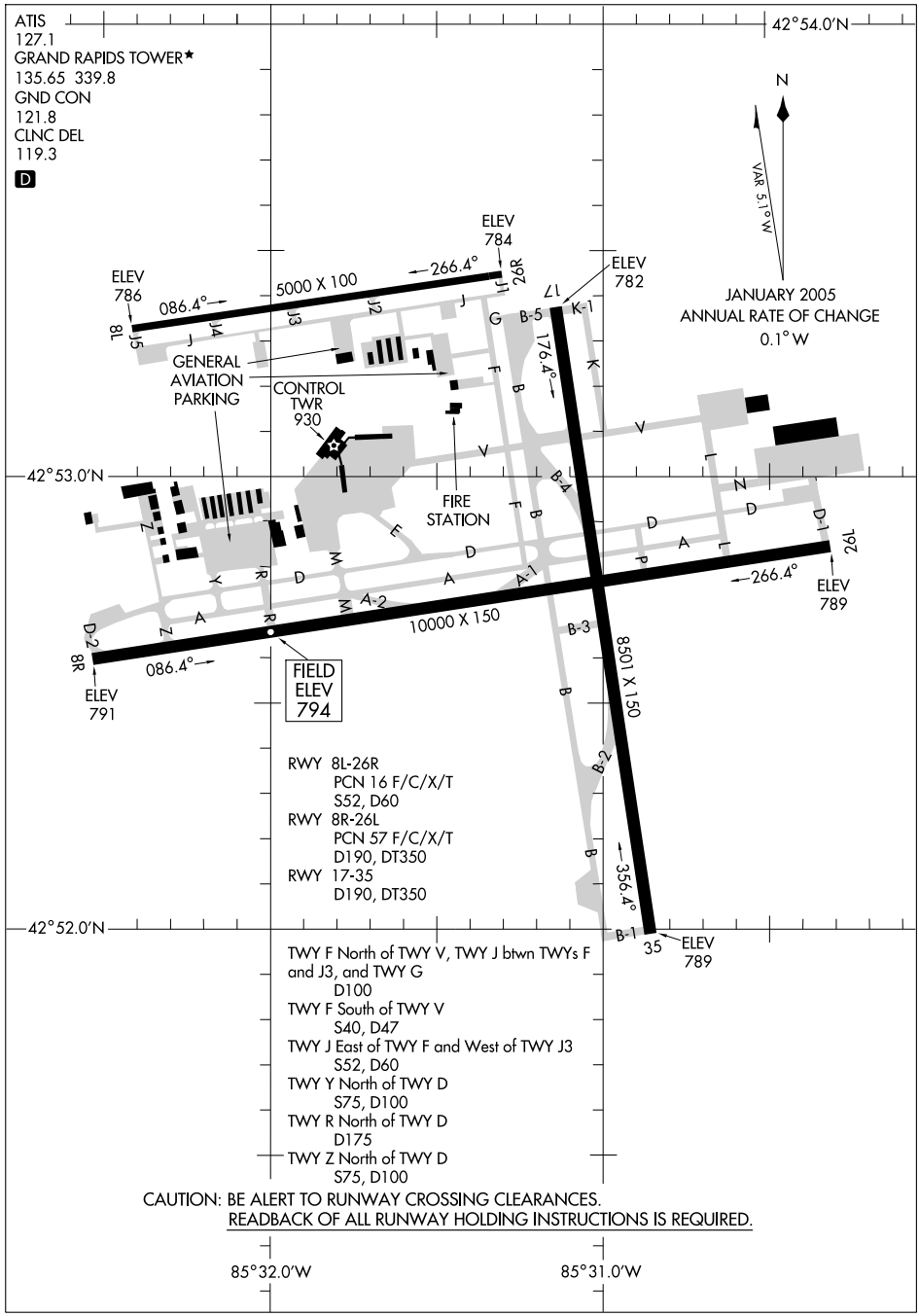
CATEGORY	A	B	C	D
CIRCLING	1400-1 558 (600-1)		1400-1½ 558 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-5184 (FAA)

GRAND RAPIDS / GERALD R. FORD INTL (GRR)
GRAND RAPIDS, MICHIGAN



LOC I-CYZ	APP CRS	Rwy ldg	10000
108.3	085°	TDZE	794
		Apt Elev	794

ILS or LOC RWY 8R

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

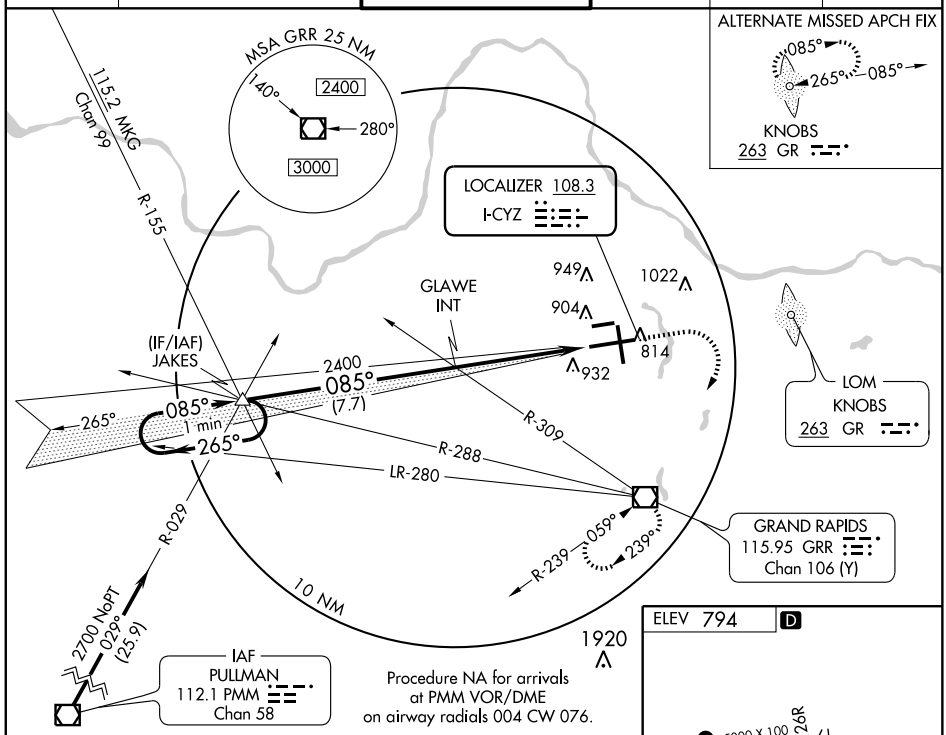
ASR

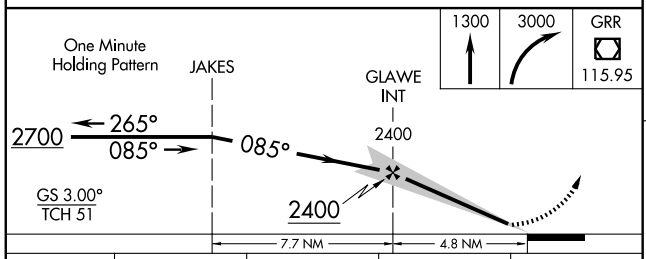
*RVR 1800 authorized with the use of FD or AP or HUD to DA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, increase S-LOC 8R Cat C visibility to RVR 5000, and Cat D to RVR 6000. For inoperative MALSR when using Holland altimeter setting, increase S-ILS 8R all Cats visibility to RVR 5000.

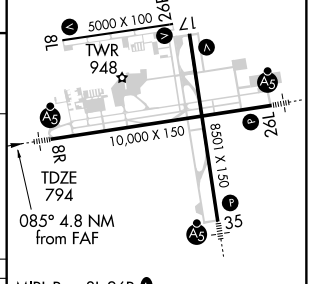
MALSR

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct GRR VOR/DME and hold.

ATIS	GRAND RAPIDS APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95







MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

CATEGORY	A	B	C	D
S-ILS 8R	*994/24 200 (200-½)			
S-LOC 8R	1240/24 446 (500-½)		1240/40 446 (500-¾)	1240/50 446 (500-1)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

FAF to MAP 4.8 NM

Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-GRR	APP CRS	Rwy ldg	10000
109.7	265°	TDZE	790
		Apt Elev	794

ILS or LOC RWY 26L

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

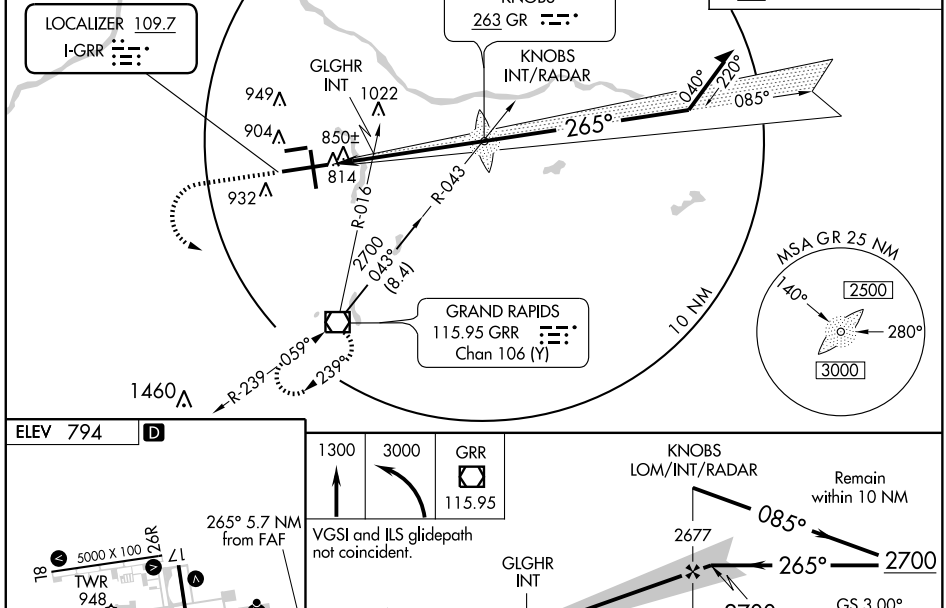
When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, increase S-LOC 26L Cat C visibility to RVR 6000, Cat D to 1½ miles, Circling Cat C to 1¾ miles, GLGHR INT minimums S-LOC 26L Cat C to RVR 4000. For inoperative MALSR when using GLGHR INT minimums, increase S-LOC 26L Cat D visibility to RVR 5000. For inoperative MALSR when using Holland altimeter setting, increase S-ILS 26L all Cats visibility to RVR 5000.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

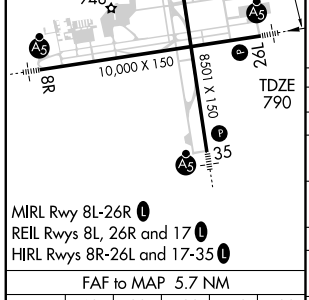
ASR

MALSR

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct GRR VOR/DME and hold.

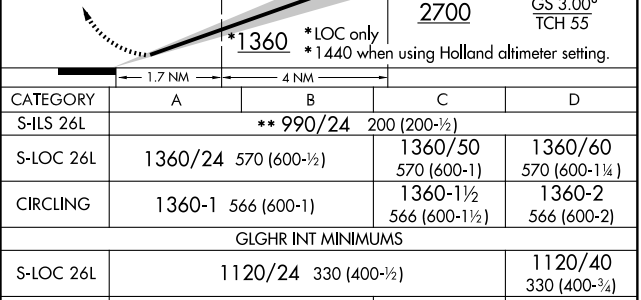
ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95





MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



CATEGORY	A	B	C	D
S-ILS 26L	** 990/24 200 (200-½)			
S-LOC 26L	1360/24 570 (600-½)		1360/50 570 (600-1)	1360/60 570 (600-1¼)
CIRCLING	1360-1 566 (600-1)		1360-1½ 566 (600-1½)	1360-2 566 (600-2)
GLGHR INT MINIMUMS				
S-LOC 26L	1120/24 330 (400-½)			1120/40 330 (400-¾)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

LOC I-DVS	APP CRS	Rwy ldg	8501
111.9	355°	TDZE	790
		Apt Elev	794

ILS or LOC RWY 35

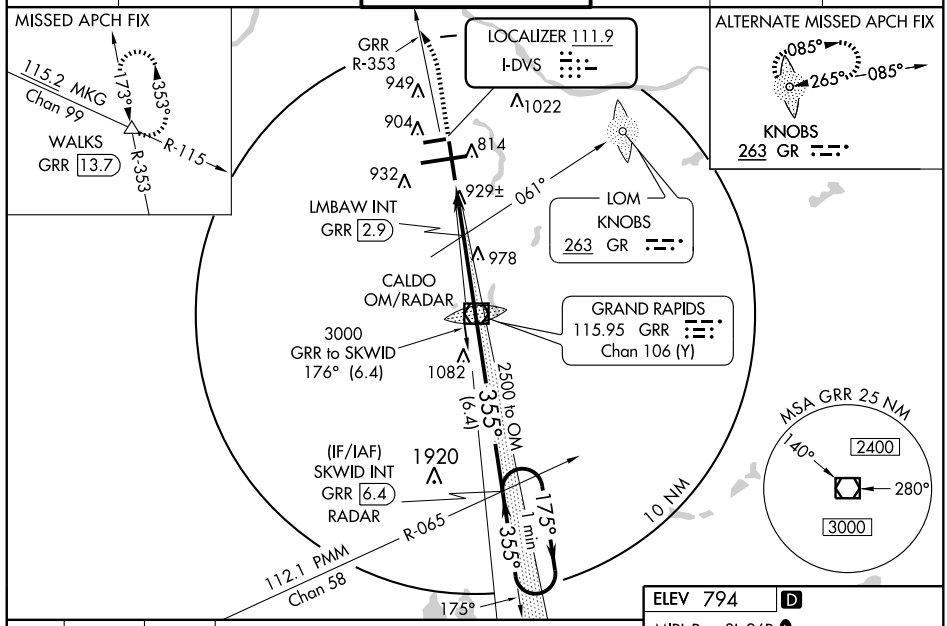
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

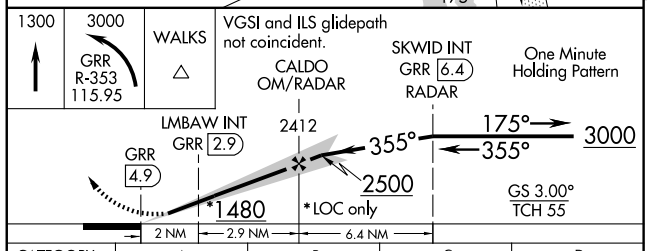
When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase S-LOC 35 Cat B visibility to RVR 4000 and Cat C/D visibility ¼ mile. Increase Cat B/C/D Circling visibility ¼ mile.
ASR
LMBAW INT MINIMUMS: Increase S-LOC 35 Cat C visibility to RVR 4000 and Cat D to RVR 5000. For inoperative MALSR when using Holland altimeter setting, increase S-ILS 35 all Cats visibility to RVR 5000.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 via GRR VOR/DME R-353 to WALKS INT/GRR 13.7 DME and hold.

ATIS	GRAND RAPIDS APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

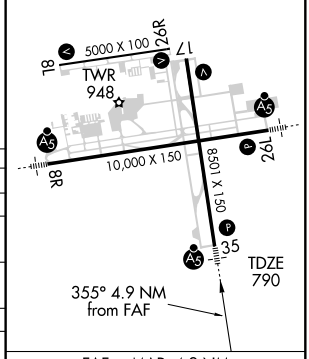




CATEGORY	A	B	C	D
S-ILS 35	** 990/24 200 (200-½)			
S-LOC 35	1480/24 690 (700-½)		1480-1½ 690 (700-1½)	1480-1¾ 690 (700-1¾)
CIRCLING	1480-1 686 (700-1)		1480-2 686 (700-2)	1480-2¼ 686 (700-2¼)
LMBAW FIX MINIMUMS				
S-LOC 35	1180/24 390 (400-½)			1180/40 390 (400-¾)
CIRCLING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	1360-2 566 (600-2)

ELEV 794 D

MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L



FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-L 14 JAN 2010 to 11 FEB 2010

WAAS CH 40213 W08A	APP CRS 085°	Rwy ldg 5000 TDZE 787 Apt Elev 794

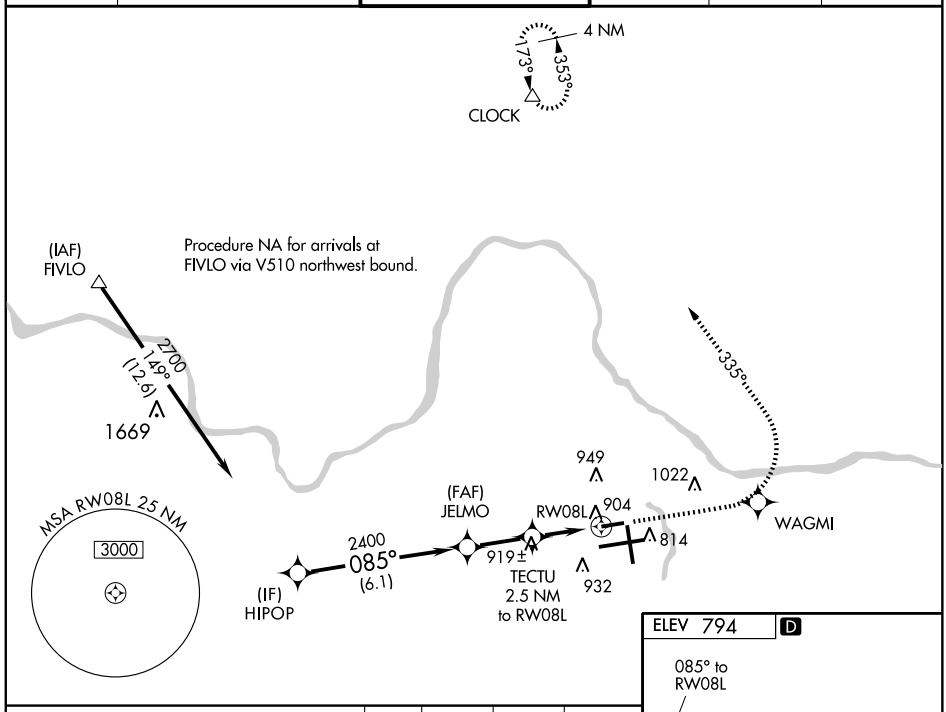
RNAV (GPS) RWY 8L

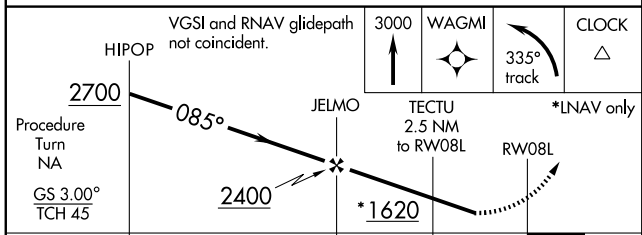
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

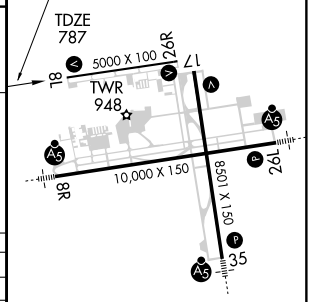
T A ASR Baro-VNAV NA when using Holland altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat C/D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct WAGMI and left turn via track 335° to CLOCK and hold.

ATIS	GRAND RAPIDS APP CON★		GRAND RAPIDS TOWER★	GND CON	CLNC DEL	UNICOM
127.1	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95







CATEGORY	A	B	C	D
LPV DA	1037-1 250 (300-1)			
LNAV/VNAV DA	1204-1½ 417 (500-1½)			
LNAV MDA	1180-1 393 (400-1)			1180-1¼ 393 (400-1¼)
CIRCLING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	1360-2 566 (600-2)

MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 40113 W08B	APP CRS 085°	Rwy ldg 10000 TDZE 794 Apt Elev 794

RNAV (GPS) RWY 8R

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

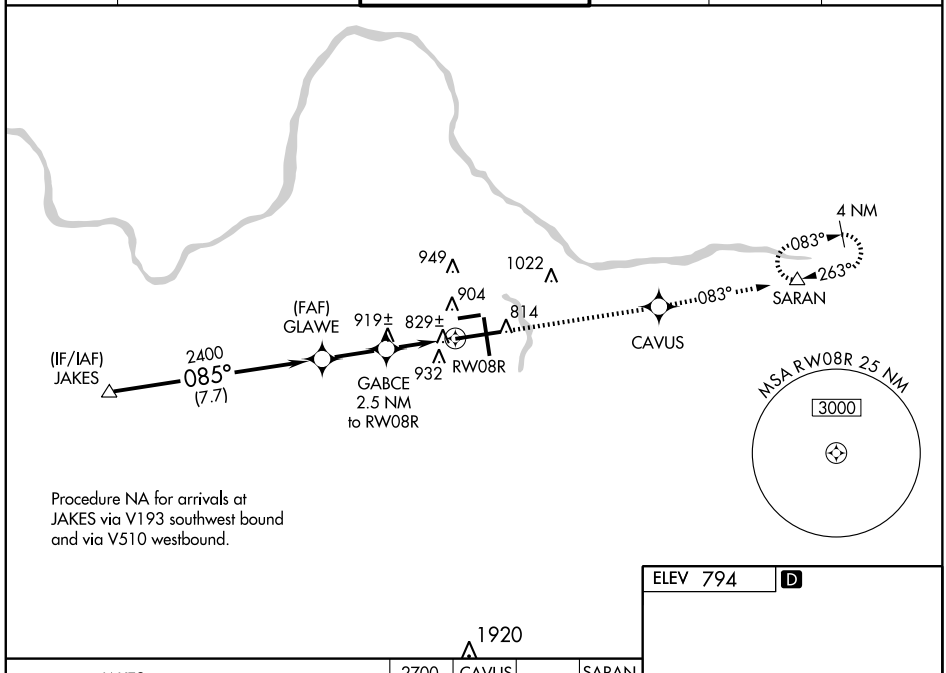
ASR

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Holland altimeter setting. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, LNAV/VNAV all Cats visibility to RVR 6000, LNAV Cat C to RVR 4000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For inoperative MALSR when using Holland altimeter setting, increase LPV all Cats visbility to RVR 5000.

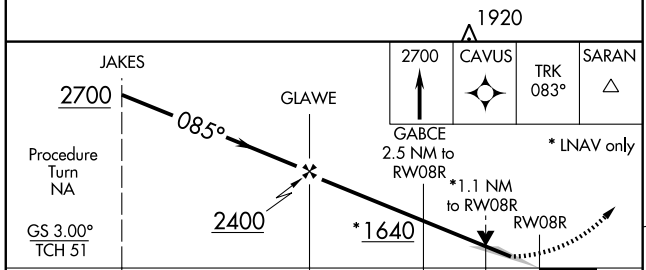
MALSR

MISSED APPROACH: Climb to 2700 direct CAVUS and via track 083° to SARAN and hold.

ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

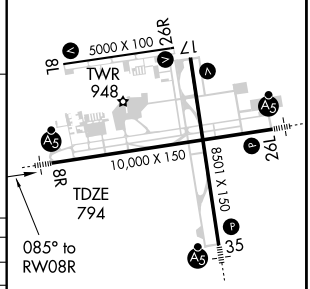


Procedure NA for arrivals at JAKES via V193 southwest bound and via V510 westbound.



CATEGORY	A	B	C	D
LPV DA	994/24 200 (200-½)			
LNAV/VNAV DA	1213/50 419 (500-1)			
LNAV MDA	1180/24 386 (400-½)			1180/50 386 (400-1)
CIRCLING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	1360-2 566 (600-2)

ELEV 794 D



MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

WAAS CH 93912 W17A	APP CRS 175°	Rwy ldg 8501 TDZE 789 Apt Elev 794

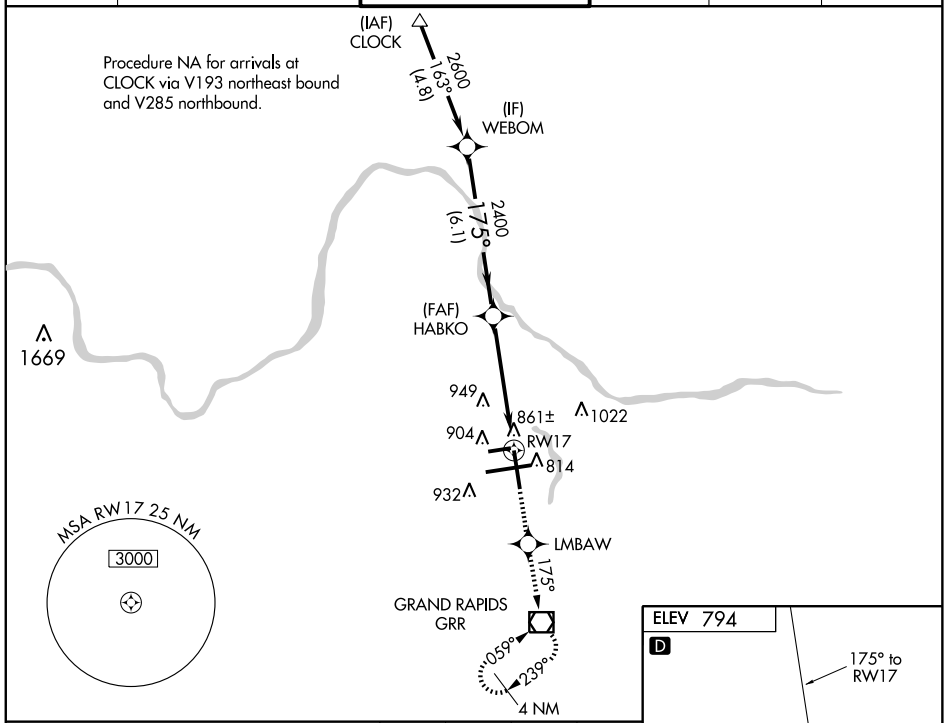
RNAV (GPS) RWY 17

GRAND RAPIDS / GERALD R. FORD INTL (GRR)

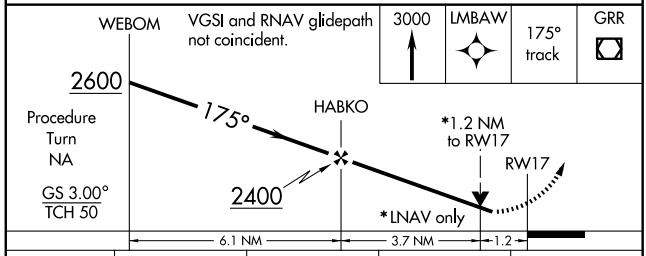
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by Helicopters NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV visibility ½ mile all Cats and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat D visibility ¼ mile. Baro-VNAV and VDP NA when using Holland altimeter setting.

MISSED APPROACH: Climb to 3000 direct LMBAW and via track 175° to GRR VOR/DME and hold, continue climb-in-hold to 3000.

ATIS	GRAND RAPIDS APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

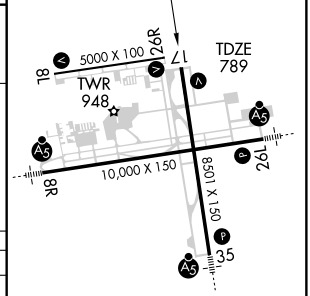


Procedure NA for arrivals at CLOCK via V193 northeast bound and V285 northbound.



Procedure Turn NA

GS 3.00°
TCH 50



CATEGORY	A	B	C	D
LPV DA	1108-1 319 (400-1)			
LNAV/VNAV DA	1259-1¾ 470 (500-1¾)			
LNAV MDA	1200-1 411 (500-1)		1200-1¼ 411 (500-1¼)	
CIRCLING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	1360-2 566 (600-2)

MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 86713 W26B	APP CRS 265°	Rwy ldg 10000 TDZE 790 Apt Elev 794

RNAV (GPS) RWY 26L

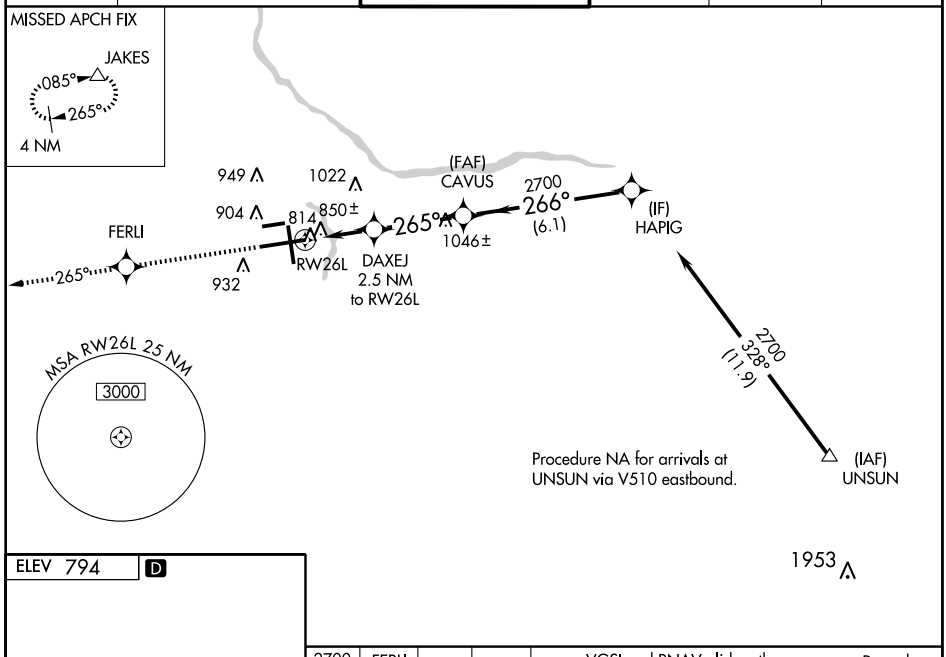
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

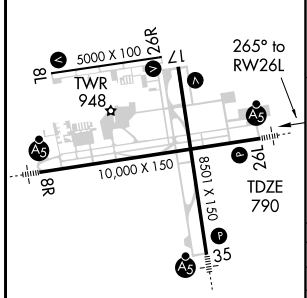
ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Holland altimeter setting. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet, LNAV/VNAV Cats A/B/C visibility to RVR 4000, LNAV Cat C to RVR 5000, Cat D to RVR 6000. For inoperative MALSR, increase LNAV/VNAV Cat D visibility to RVR 5000. For inoperative MALSR when using Holland altimeter setting, increase LPV all Cats visbility to RVR 5000.

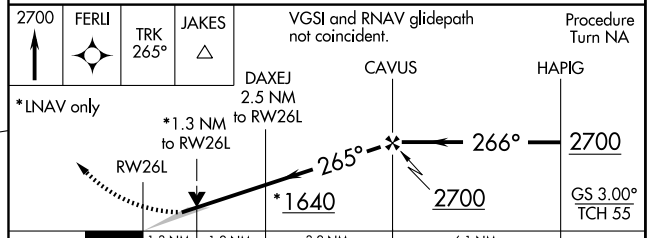
MALSR

MISSED APPROACH: Climb to 2700 direct FERLI and via 265° track to JAKES and hold.

ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95







CATEGORY	A	B	C	D
LPV DA	990/24 200 (200-½)			
LNAV/VNAV DA	1114/24 324 (400-½)			1114/40 324 (400-¾)
LNAV MDA	1280/24 490 (500-½)		1280/40 490 (500-¾)	1280/50 490 (500-1)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 82413 W26A	APP CRS 265°	Rwy ldg 5000 TDZE 787 Apt Elev 794

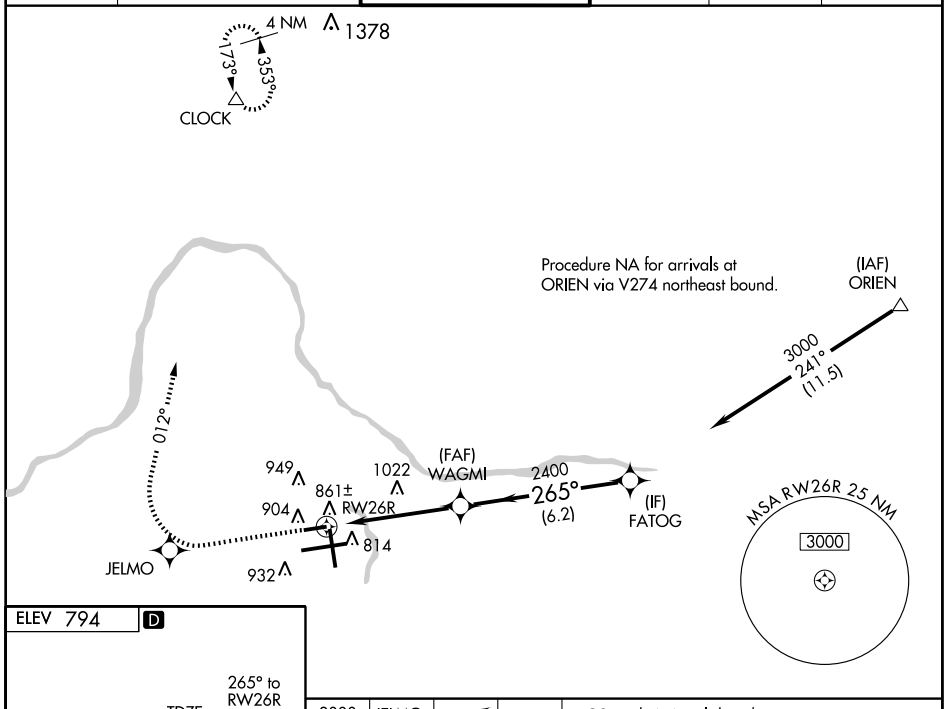
RNAV (GPS) RWY 26R

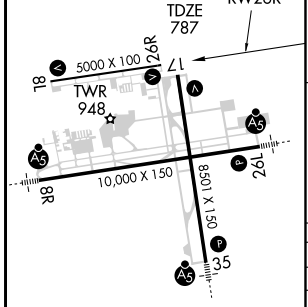
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

Baro-VNAV NA when using Holland altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.
ASR Visibility reduction by helicopters NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV visibility ¼ mile all Cats. Increase LNAV Cat C/D ¼ mile.

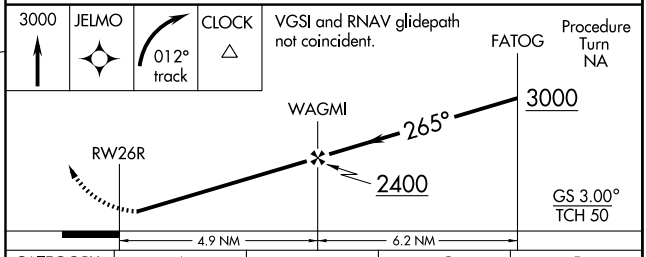
MISSED APPROACH: Climb to 3000 direct JELMO and right turn via track 012° to CLOCK and hold.

ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95





MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L



CATEGORY	A	B	C	D
LPV DA	1037-1 250 (300-1)			
LNAV/VNAV DA	1216-1½ 429 (500-1½)			
LNAV MDA	1280-1 493 (500-1)		1280-1¼ 493 (500-1¼)	1280-1½ 493 (500-1½)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

WAAS CH 87112 W35A	APP CRS 355°	Rwy ldg 8501 TDZE 790 Apt Elev 794

RNAV (GPS) RWY 35

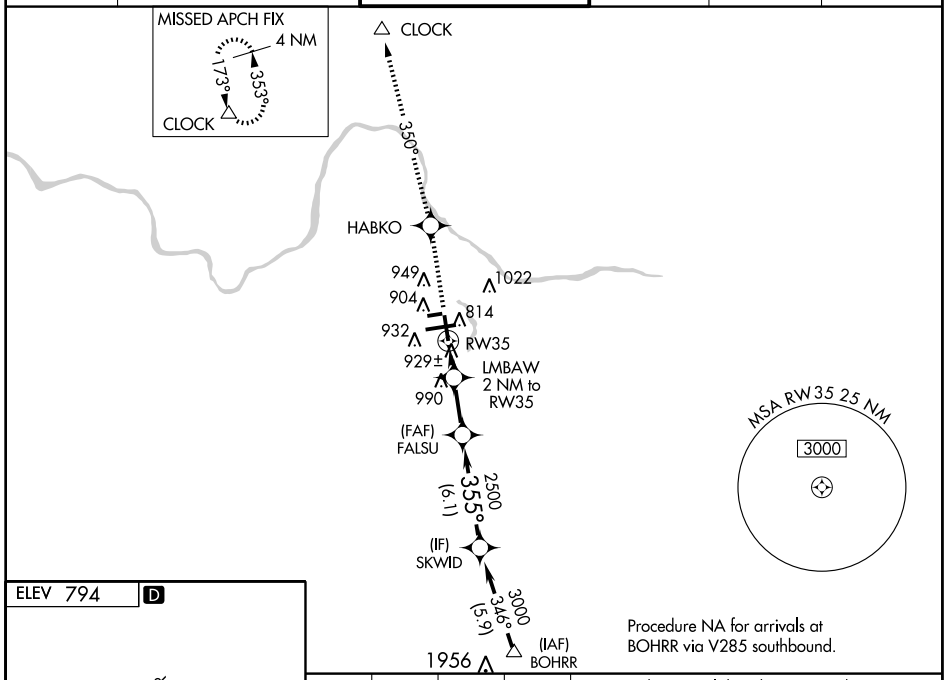
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Holland altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LNAV/VNAV visibility to RVR 6000 all Cats and LNAV Cat C visibility to RVR 4000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For inoperative MALSR when using Holland altimeter setting increase LPV all Cats visbility to RVR 5000. Baro-VNAV and VDP NA when using Holland altimeter setting.

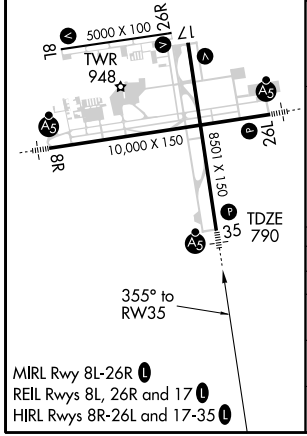
MALSR

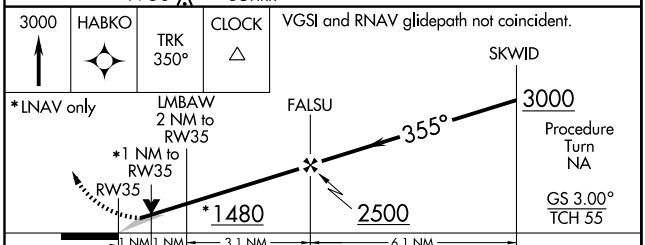
MISSED APPROACH: Climb to 3000 direct HABKO and via track 350° to CLOCK and hold.

ATIS	GRAND RAPIDS APP CON★	GRAND RAPIDS TOWER★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



Procedure NA for arrivals at BOHRR via V285 southbound.





CATEGORY	A	B	C	D
LPV DA	990/24 200 (200-½)			
LNAV/VNAV DA	1236/50 446 (500-1)			
LNAV MDA	1180/24 390 (400-½)			1180/50 390 (400-1)
CIRCLING	1260-1 466 (500-1)		1260-1½ 466 (500-1½)	1360-2 566 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 175°	Rwy ldg 8501 TDZE 789 Apt Elev 794

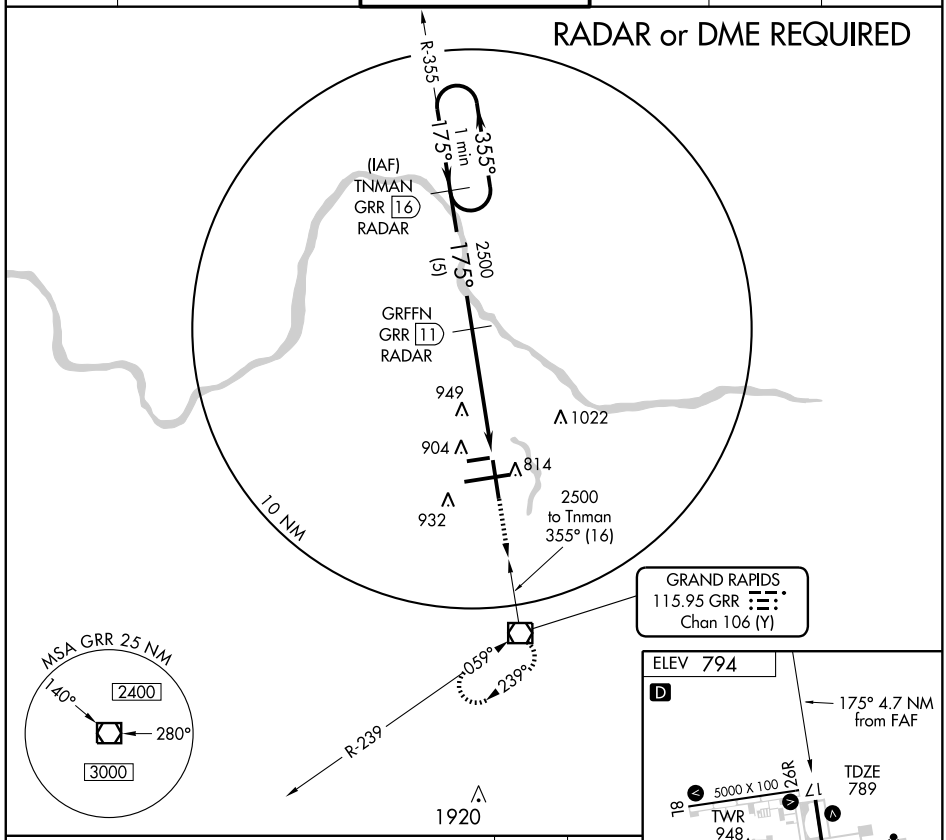
VOR RWY 17

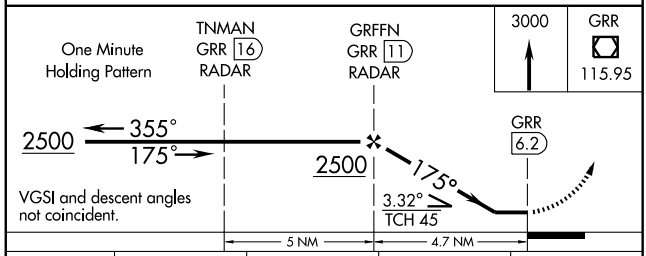
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

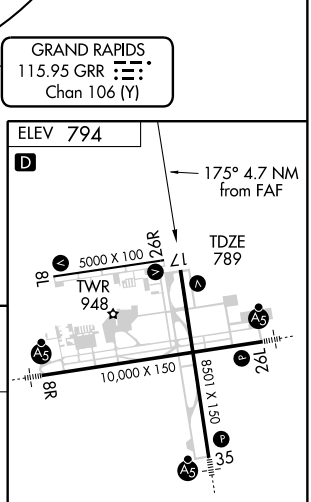
ASR

MISSED APPROACH: Climb to 3000 direct GRR VOR/DME and hold.

ATIS	GRAND RAPIDS APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95







MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

CATEGORY	A	B	C	D
S-17	1200-1 411 (500-1)		1200-1¼ 411 (500-1¼)	
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 355°	Rwy ldg 8501 TDZE 790 Apt Elev 794

VOR RWY 35

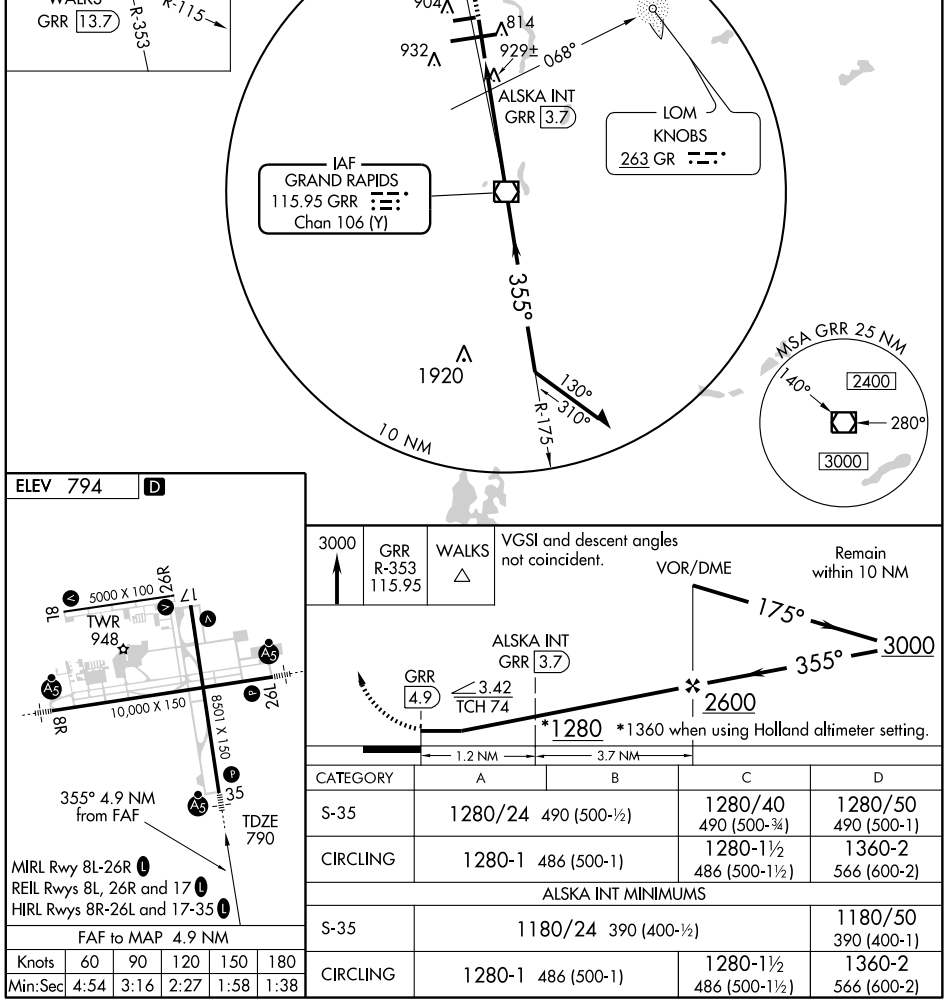
GRAND RAPIDS / GERALD R. FORD INTL (GRR)

ASR: When local altimeter setting not received, use Holland altimeter setting and increase all MDA 80 feet, S-35 Cat C visibility to RVR 5000, Cat D to RVR 6000, ALSKA INT minimums S-35 Cat C to RVR 4000. For inoperative MALSR, increase ALSKA INT minimums S-35 Cat D visibility to RVR 6000.

MALSR

MISSED APPROACH: Climb to 3000 via GRR VOR/DME R-353 to WALKS INT/GRR 13.7 DME and hold.

ATIS	GRAND RAPIDS APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
127.1	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

CATEGORY	A	B	C	D
S-35	1280/24 490 (500-½)		1280/40 490 (500-¾)	1280/50 490 (500-1)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)
ALSKA INT MINIMUMS				
S-35	1180/24 390 (400-½)			1180/50 390 (400-1)
CIRCLING	1280-1 486 (500-1)		1280-1½ 486 (500-1½)	1360-2 566 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB GYG 359	APP CRS 142°	Rwy ldg 5000 TDZE 1153 Apt Elev 1158

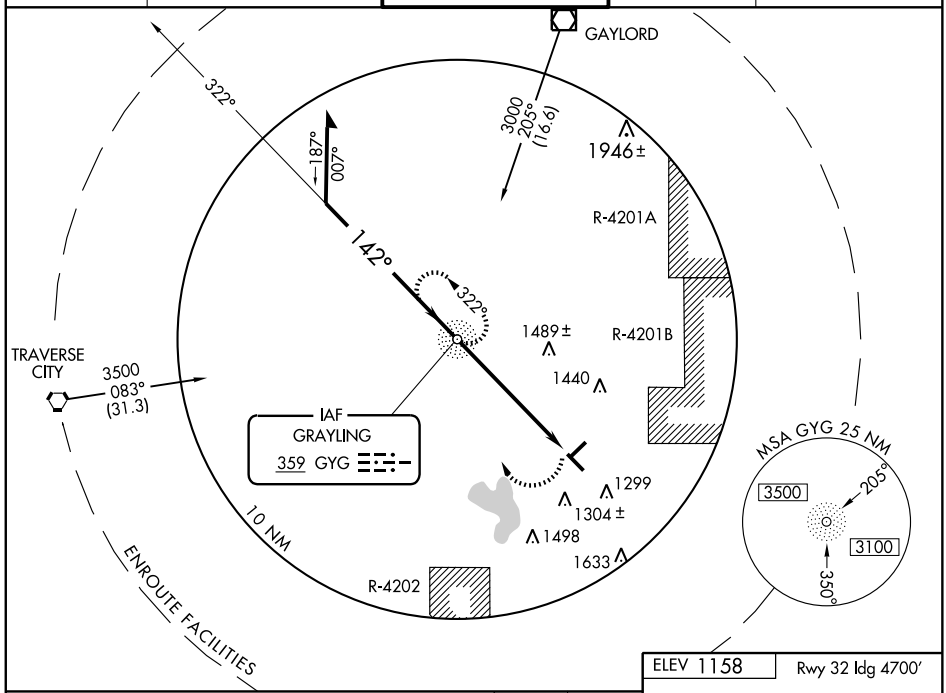
NDB RWY 14
GRAYLING AAF (GOV)

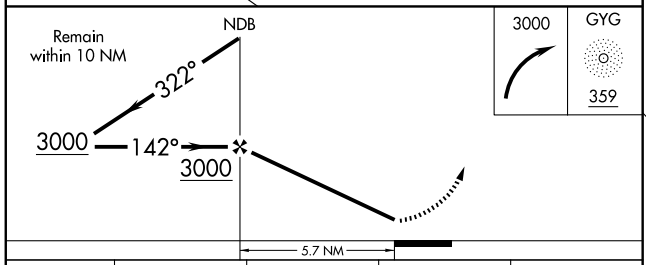
Use Houghton Lake altimeter setting; when not received, use Traverse City altimeter setting.

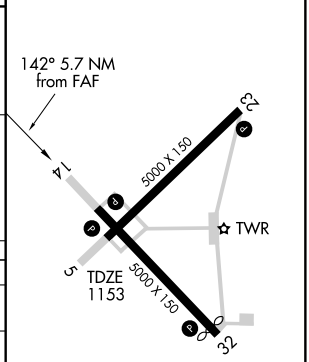
NA

MISSED APPROACH: Climbing right turn to 3000 direct GYG NDB and hold.

AWOS-3	MINNEAPOLIS CENTER	GRAYLING TOWER ★	GND CON	UNICOM
119.075	132.9 338.3	126.2 241.0	121.9	122.8 (CTAF) L







REIL Rwys 5, 23, 14 and 32 L

MIRL Rwy 5-23 and 14-32 L

CATEGORY	A	B	C	D
S-14	1820-1 667 (700-1)		1820-1¾ 667 (700-1¾)	1820-2 667 (700-2)
CIRCLING	1820-1 662 (700-1)		1820-1¾ 662 (700-1¾)	1820-2 662 (700-2)
TRAVERSE CITY ALTIMETER SETTING MINIMUMS				
S-14	1980-1 827 (800-1)	1980-1¼ 827 (800-1¼)	1980-2½ 827 (800-2½)	1980-2¾ 827 (800-2¾)
CIRCLING	1980-1 822 (900-1)	1980-1¼ 822 (900-1¼)	1980-2½ 822 (900-2½)	1980-2¾ 822 (800-2¾)

FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

EC-1. 14 JAN 2010 to 11 FEB 2010

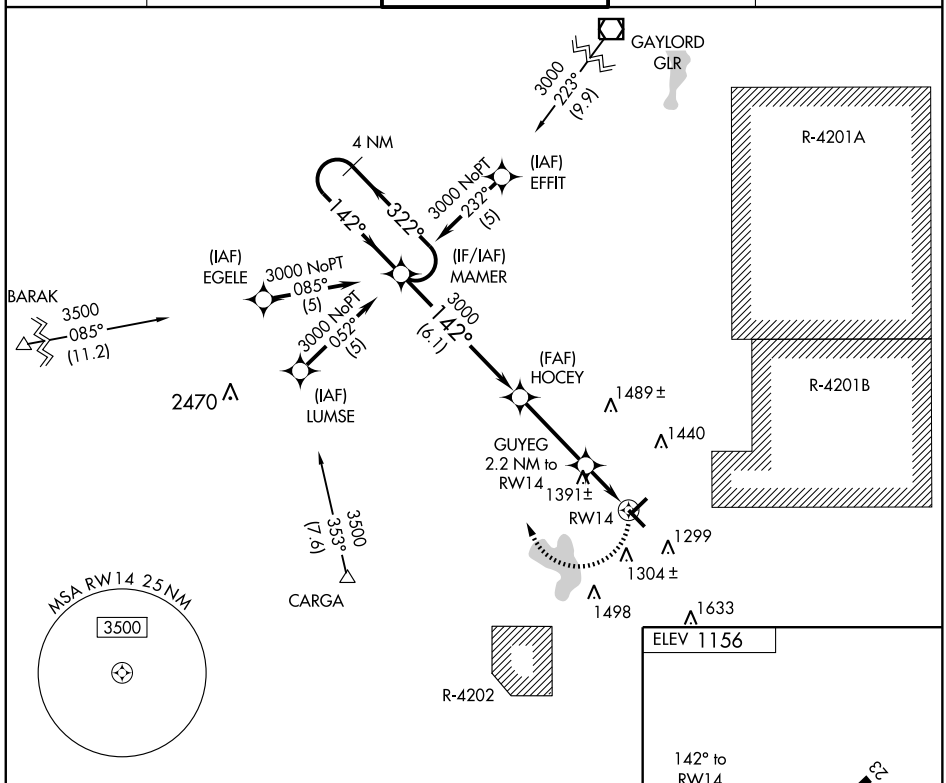
APP CRS	Rwy ldg	5000
142°	TDZE	1151
	Apt Elev	1156

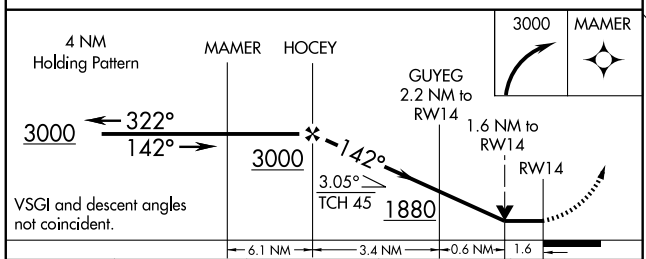
RNAV (GPS) RWY 14
GRAYLING AAF (GOV)

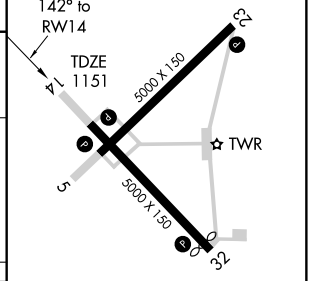
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
VDP NA when using Houghton Lake altimeter setting.
When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDA 60 feet, increase LNAV Cat C and D and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climbing right turn to 3000 direct MAMER and hold.

AWOS-3	MINNEAPOLIS CENTER	GRAYLING TOWER ★	GND CON	UNICOM
119.075	132.9 338.3	126.2 241.0	121.9	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1700-1 549 (600-1)		1700-1½ 549 (600-1½)	1700-1¾ 549 (600-1¾)
CIRCLING	1720-1 564 (600-1)		1720-1½ 564 (600-1½)	1760-2 604 (700-2)

REIL Rwys 5, 23, 14 and 32 L
MIRL Rwy 5-23 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR CGG 109.8	APP CRS 124°	Rwy ldg 5000 TDZE 1153 Apt Elev 1158

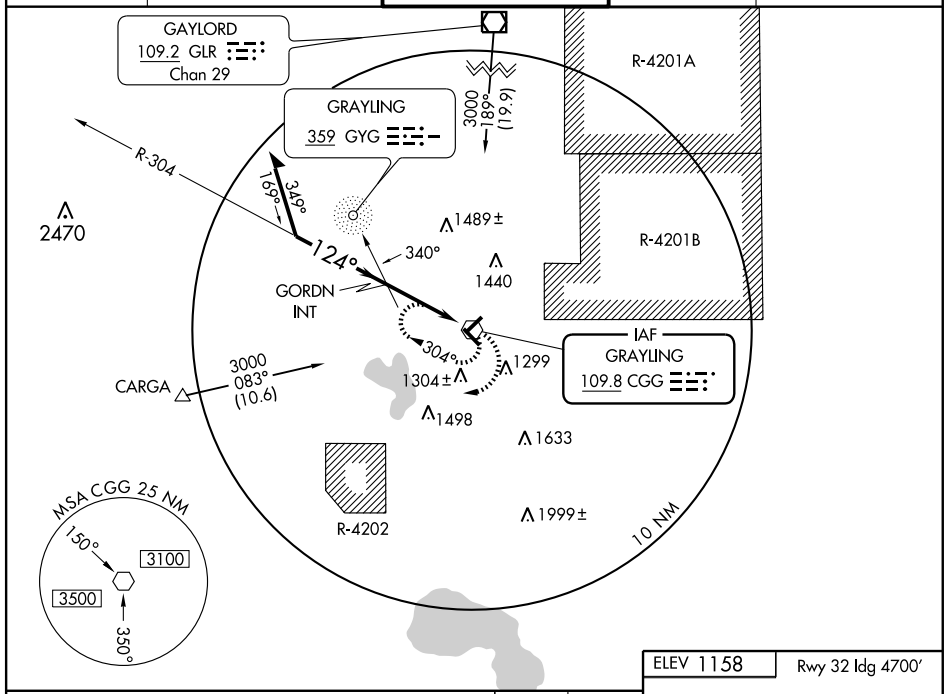
VOR RWY 14
GRAYLING AAF (GOV)

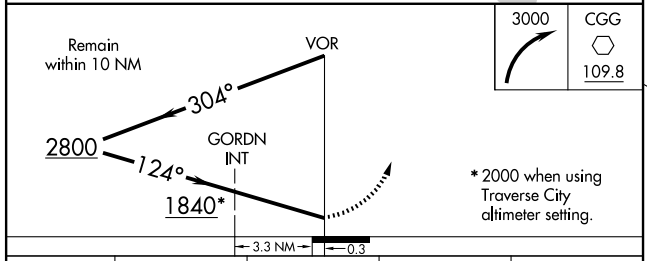
NA

Use Houghton Lake altimeter setting; when not received, use Traverse City altimeter setting and increase all MDAs 160 feet and all visibilities ½ mile.

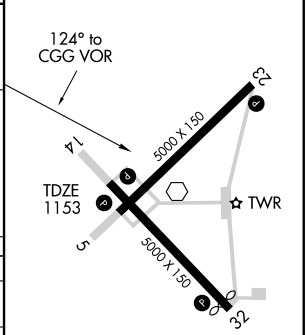
MISSED APPROACH: Climbing right turn to 3000 in CGG VOR holding pattern.

AWOS-3	MINNEAPOLIS CENTER	GRAYLING TOWER *	GND CON	UNICOM
119.075	132.9 338.3	126.2 241.0	121.9	122.8 (CTAF) L





* 2000 when using Traverse City altimeter setting.



REIL Rwys 5, 23, 14 and 32 L
MIRL Rwy 5-23 and 14-32 L

CATEGORY	A	B	C	D
S-14	1840-1 687 (700-1)		1840-2 687 (700-2)	1840-2¼ 687 (700-2¼)
CIRCLING	1840-1 682 (700-1)		1840-2 682 (700-2)	1840-2¼ 682 (700-2¼)
GORDN INT MINIMUMS				
S-14	1720-1 567 (600-1)		1720-1½ 567 (600-1½)	1720-1¾ 567 (600-1¾)
CIRCLING	1720-1 562 (600-1)	1780-1 622 (700-1)	1780-1¾ 622 (700-1¾)	1800-2 642 (700-2)

Knots	60	90	120	150	180
Min:Sec					

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4199
099°	TDZE	855
	Apt Elev	855

RNAV (GPS) RWY 10
GREENVILLE MUNI (6D6)

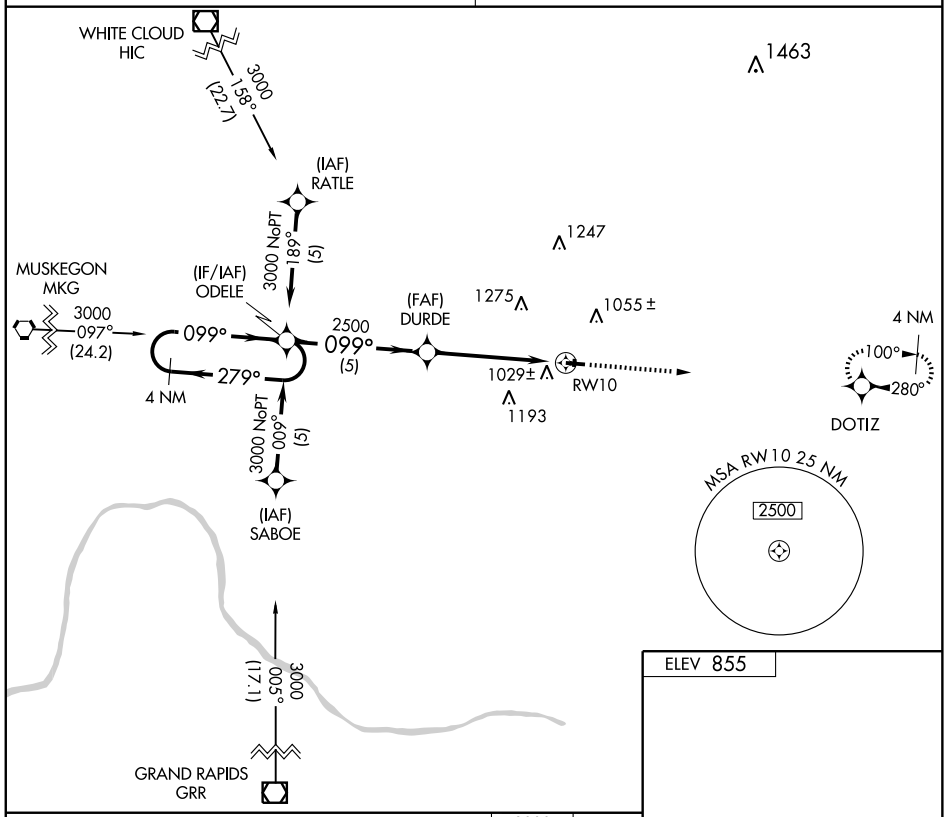
Use Grand Rapids/Gerald R. Ford Intl altimeter setting.
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

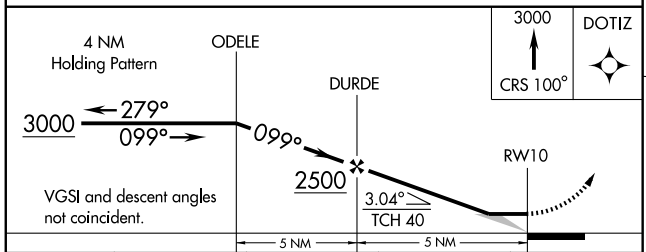
NA

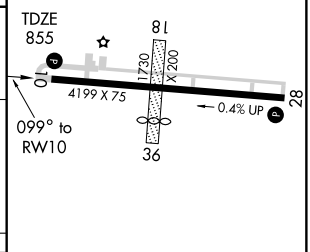
MISSED APPROACH: Climb to 3000 via 100° course to DOTIZ WP and hold.

GRAND RAPIDS APP CON ★
124.6 257.6

UNICOM
122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1340-1 485 (500-1)		1340-1¼ 485 (500-1¼)	NA
CIRCLING	1400-1 545 (600-1)		1420-1½ 565 (600-1½)	NA

REIL Rwy 28 L
MIRL Rwy 10-28 L

APP CRS	Rwy ldg	4199
280°	TDZE	847
	Apt Elev	855

RNAV (GPS) RWY 28
GREENVILLE MUNI (6D6)

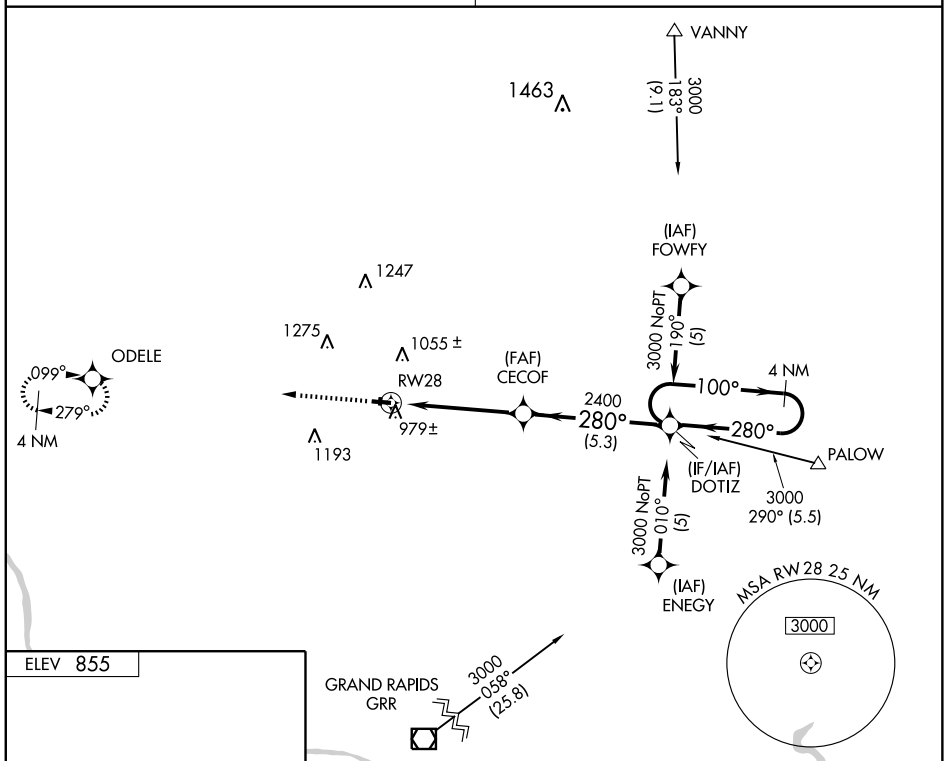
Use Grand Rapids/Gerald R. Ford Intl altimeter setting.
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

NA

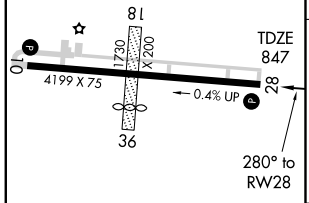
MISSED APPROACH: Climb to 3000 via 280° course to ODELE WP and hold.

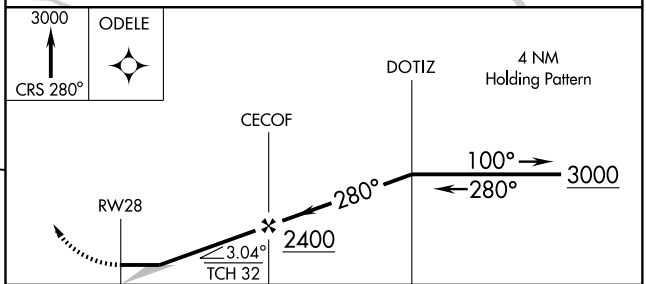
GRAND RAPIDS APP CON ★
124.6 257.6

UNICOM
122.8 (CTAF) L



ELEV 855





CATEGORY	A	B	C	D
LNAV MDA	1300-1 453 (500-1)		1300-1¼ 453 (500-1¼)	NA
CIRCLING	1400-1 545 (600-1)		1420-1½ 565 (600-1½)	NA

REIL Rwy 28 L
MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 031°	Rwy ldg N/A TDZE N/A Apt Elev 855

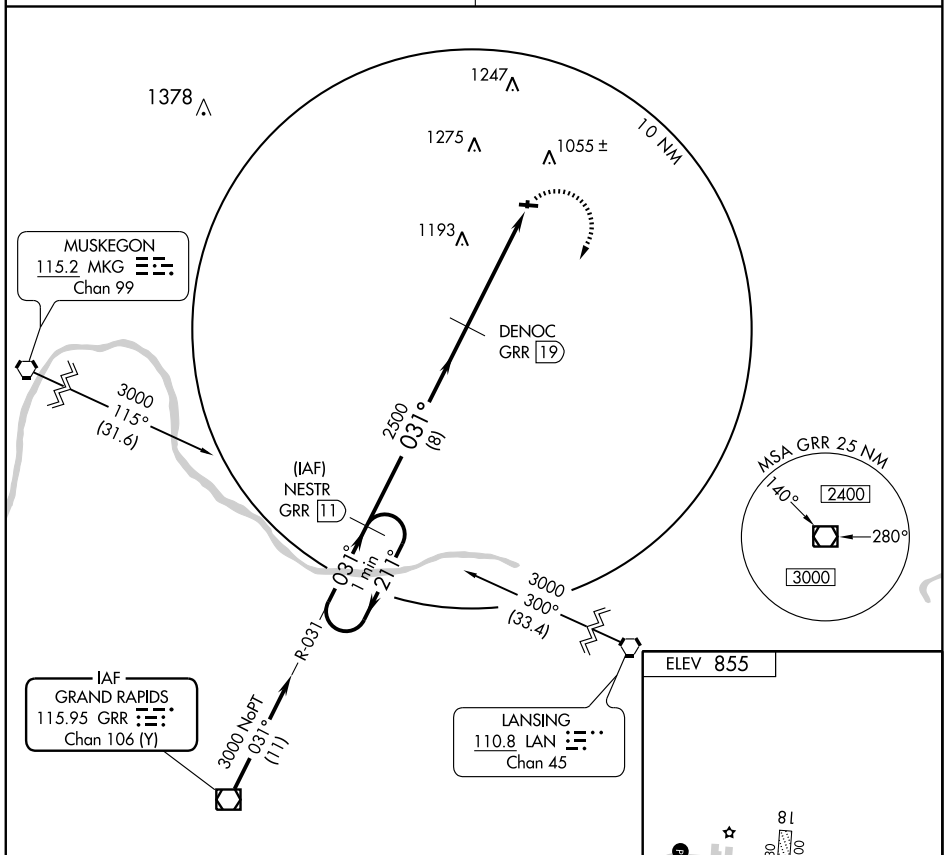
VOR/DME-A
GREENVILLE MUNI (6D6)

NA

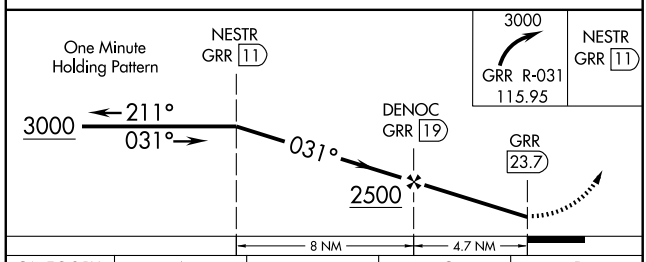
Use Grand Rapids/Gerald R. Ford Intl altimeter setting.

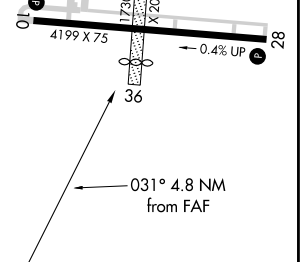
MISSED APPROACH: Climbing right turn to 3000 via the GRR VOR/DME R-031 to NESTR and hold.

GRAND RAPIDS APP CON ★	UNICOM
124.6 257.6	122.8 (CTAF) L



ELEV 855





CATEGORY	A	B	C	D
CIRCLING	1500-1 645 (700-1)	1500-1¼ 645 (700-1¼)	1500-1¾ 645 (700-1¾)	NA

REIL Rwy 28 L
MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-CMX	APP CRS	Rwy ldg	6501
110.3	313°	TDZE	1070
Chan 40		Apt Elev	1095

ILS or LOC RWY 31

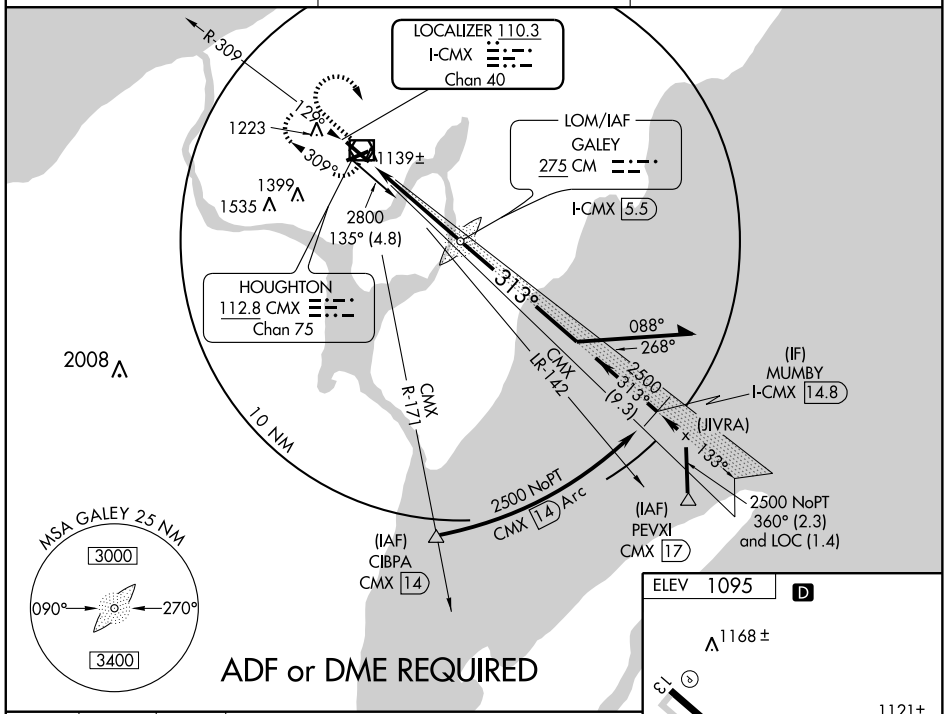
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

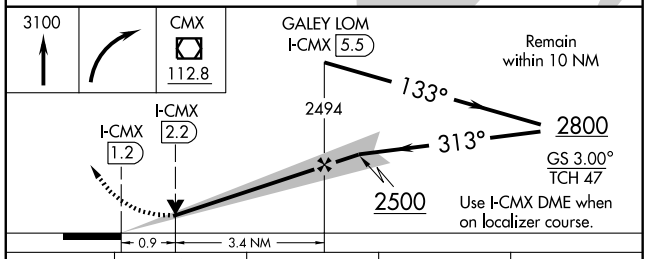
For inoperative MALSR, increase S-LOC 31 Cat D visibility to 1 mile.
When local altimeter setting not received use Marquette altimeter setting and increase DA to 1441 and S-ILS 31 visibility to ¾, increase all MDA 180′ and S-LOC 31 visibility Cat C to ¾ mile, Cat D to 1 mile. Increase Circling Cat C visibility to 1¾ mile, Cat D visibility to 2½ mile. For inoperative MALSR when using Marquette altimeter setting increase S-ILS 31 visibility all Cats to 1¼ mile.
VDP NA when using Marquette altimeter setting. Request MIRL Rwy 7-25 CTAF.

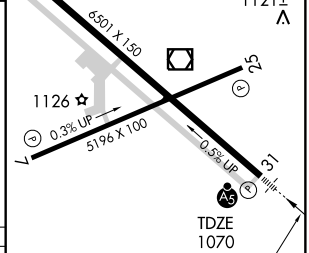
MALSR

MISSED APPROACH: Climb to 3100 then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

313° 4.3 NM from FAF

CATEGORY	A	B	C	D
S-ILS 31	1270-½ 200 (200-½)			
S-LOC 31	1400-½ 330 (400-½)			1400-¾ 330 (400-¾)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-CMX 110.3 Chan 40	APP CRS 133°	Rwy ldg 6501 TDZE 1095 Apt Elev 1095

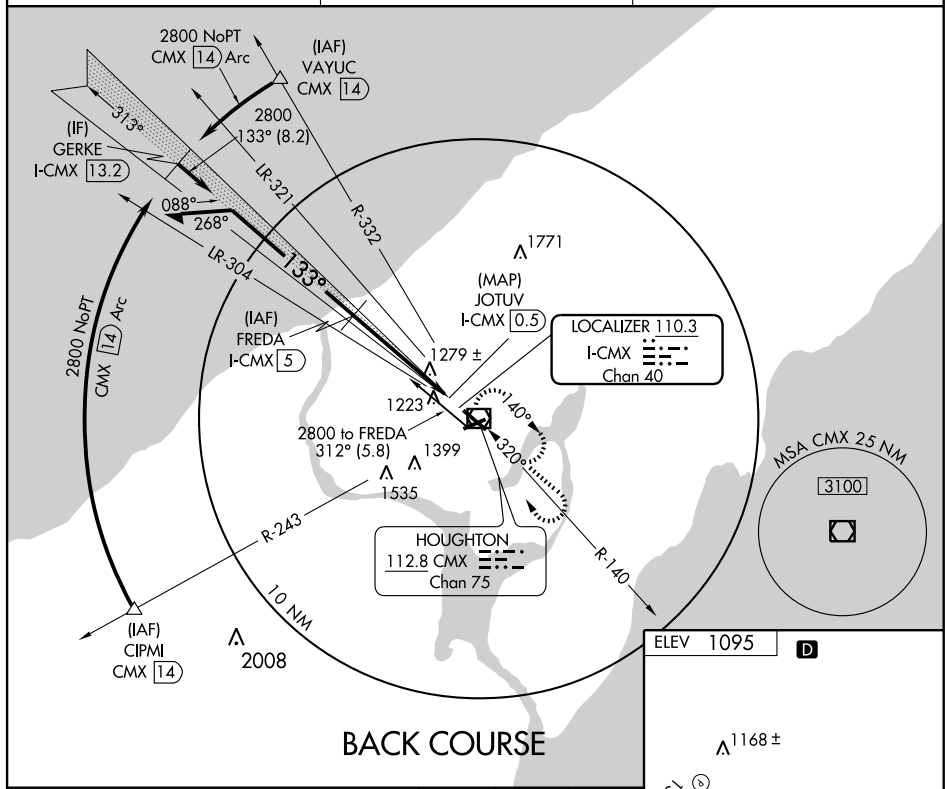
LOC/DME BC RWY 13

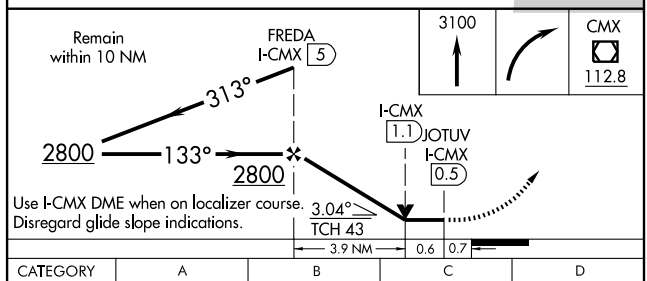
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

Request MIRL Rwy 7-25 CTAF.
When local altimeter setting not received use Marquette altimeter setting and increase all MDA 180 feet and S-13 Cat C and D visibility ½ mile, increase Circling visibility Cat C and D ¼ mile.
VDP NA when using Marquette altimeter setting.

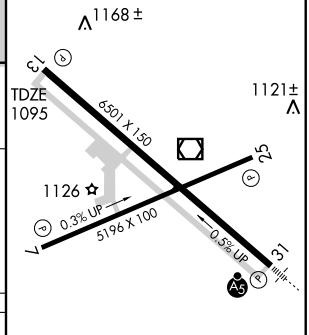
MISSED APPROACH: Climb to 3100 then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L





CATEGORY	A	B	C	D
S-13	1540-1 445 (500-1)		1540-1¼ 445 (500-1¼)	1540-1½ 445 (500-1½)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)



MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

APP CRS	Rwy ldg	5196
069°	TDZE	1067
	Apt Elev	1095

RNAV (GPS) RWY 7

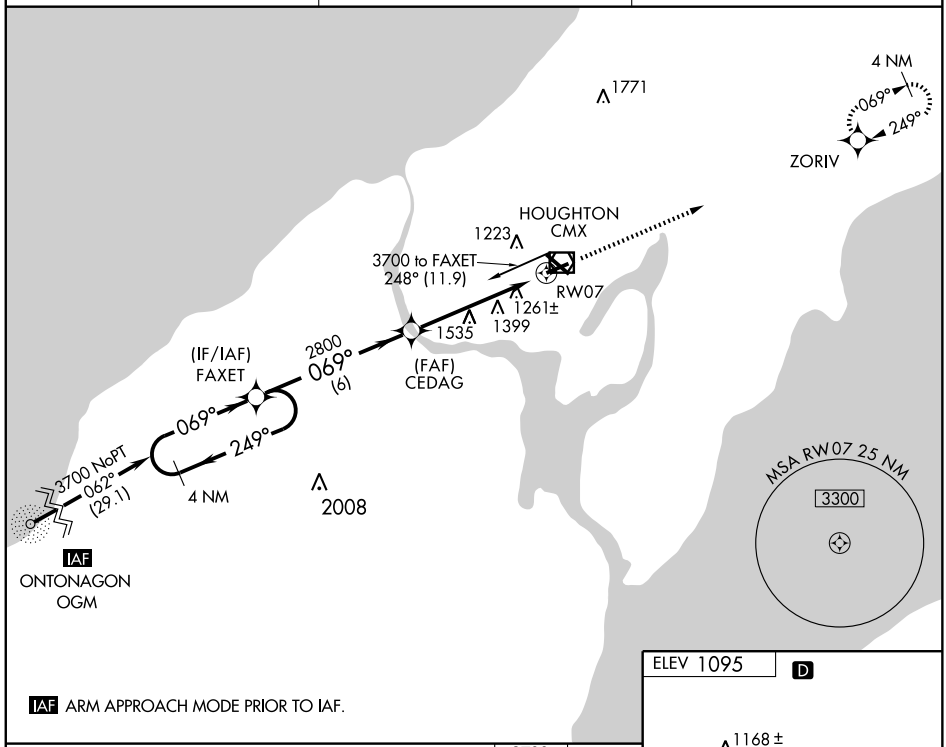
HANCOCK/ HOUGHTON COUNTY MEMORIAL (CMX)

Baro-VNAV NA below -17°C (2°F).
GPS or RNP -0.3 required.
DME/DME RNP -0.3 NA.

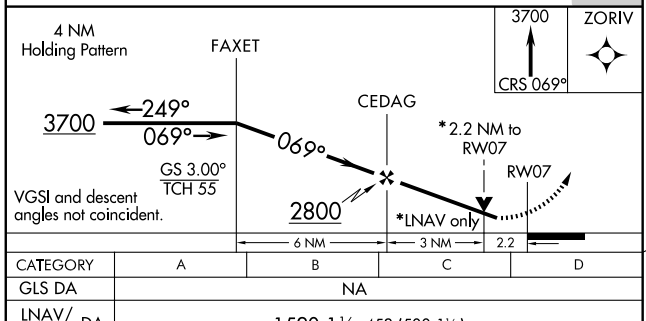
NA

MISSED APPROACH: Climb to 3700 via 069° course to ZORIV WP and hold.

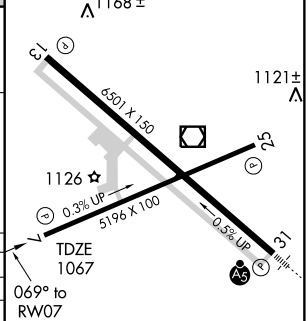
ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L



IAF ARM APPROACH MODE PRIOR TO IAF.



CATEGORY	A	B	C	D
GLS DA	NA			
LNAV/ VNAV DA	1520-1½ 453 (500-1½)			
LNAV MDA	1840-1 773 (800-1)	1840-1¼ 773 (800-1¼)	1840-2¼ 773 (800-2¼)	1840-2½ 773 (800-2½)
CIRCLING	1840-1½ 745 (800-1½)		1840-2¼ 745 (800-2¼)	1840-2½ 745 (800-2½)



MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

APP CRS	Rwy ldg	6501
133°	TDZE	1095
	Apt Elev	1095

RNAV (GPS) RWY 13

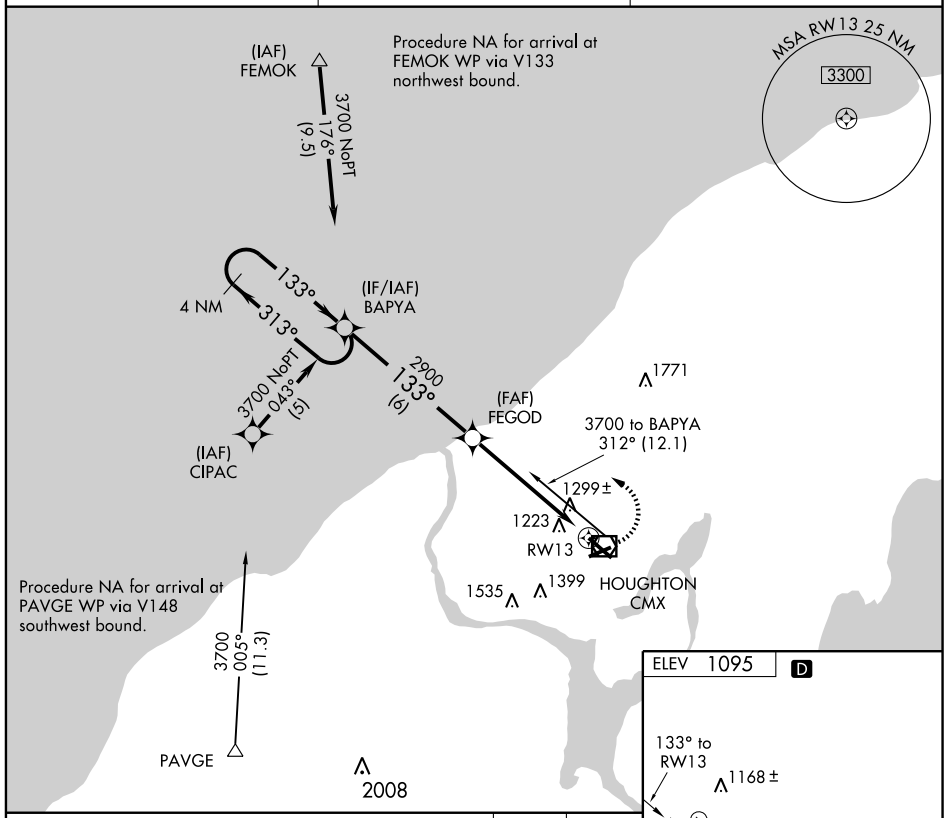
HANCOCK/ HOUGHTON COUNTY MEMORIAL (CMX)

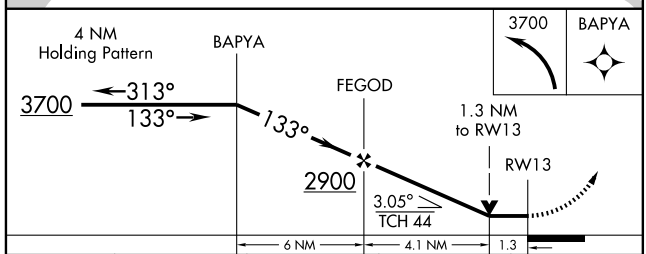
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

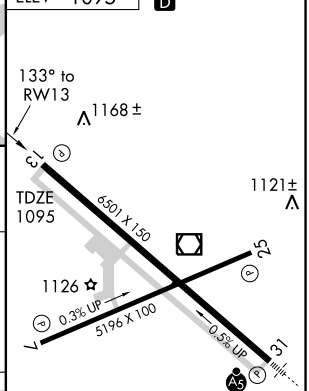
NA

MISSED APPROACH: Climbing left turn to 3700 direct BAPYA WP and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

CATEGORY	A	B	C	D
LNAV MDA	1560-1 465 (500-1)		1560-1¼ 465 (500-1¼)	1560-1½ 465 (500-1½)
CIRCLING	1600-1 505 (600-1)		1600-1½ 505 (600-1½)	1700-2 605 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5196
249°	TDZE	1074
	Apt Elev	1095

RNAV (GPS) RWY 25

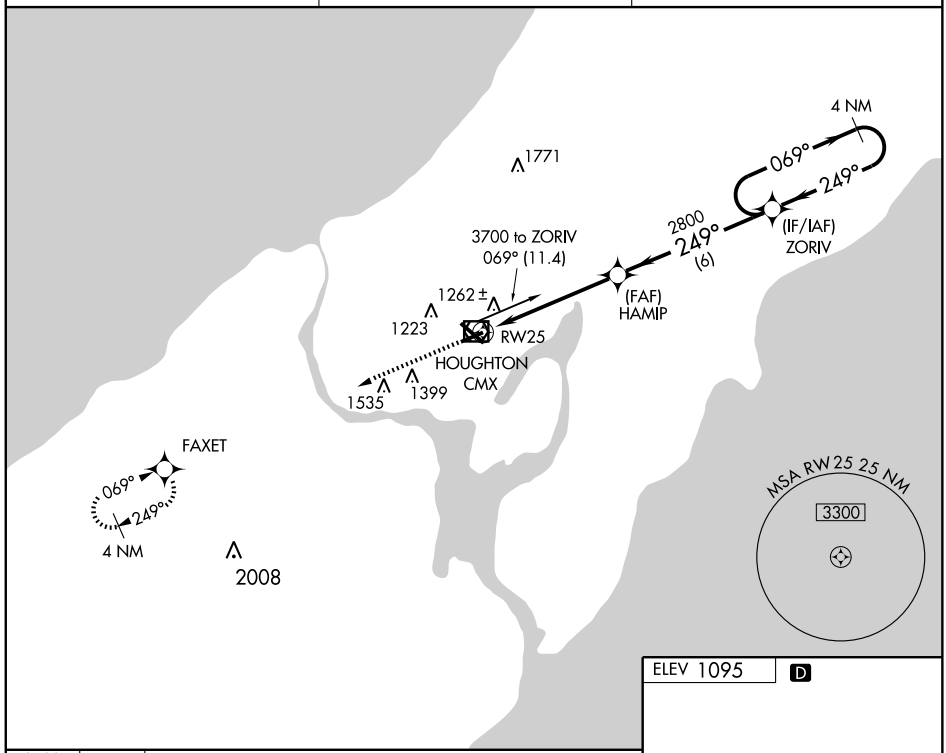
HANCOCK/HOUGHTON COUNTY MEMORIAL (CMX)

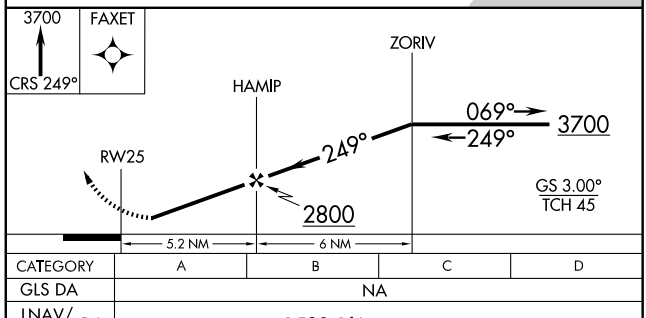
T NA

Baro-VNAV NA below -17°C (2°F)
GPS or RNP -0.3 required.
DME/DME RNP -0.3 NA.

MISSED APPROACH: Climb to 3700 via 249° course to FAXET WP and hold.

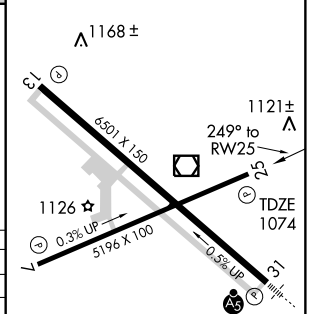
ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L





CATEGORY	A	B	C	D
GLS DA	NA			
LNAV/VNAV DA	1520-1½ 446 (500-1½)			
LNAV MDA	1520-1 446 (500-1)		1520-1¼ 446 (500-1¼)	1520-1½ 446 (500-1½)
CIRCLING	1580-1½ 485 (500-1½)			1700-2 605 (700-2)

ELEV 1095 D



MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 45809 W31A	APP CRS 313°	Rwy ldg 6501 TDZE 1070 Apt Elev 1095

RNAV (GPS) RWY 31

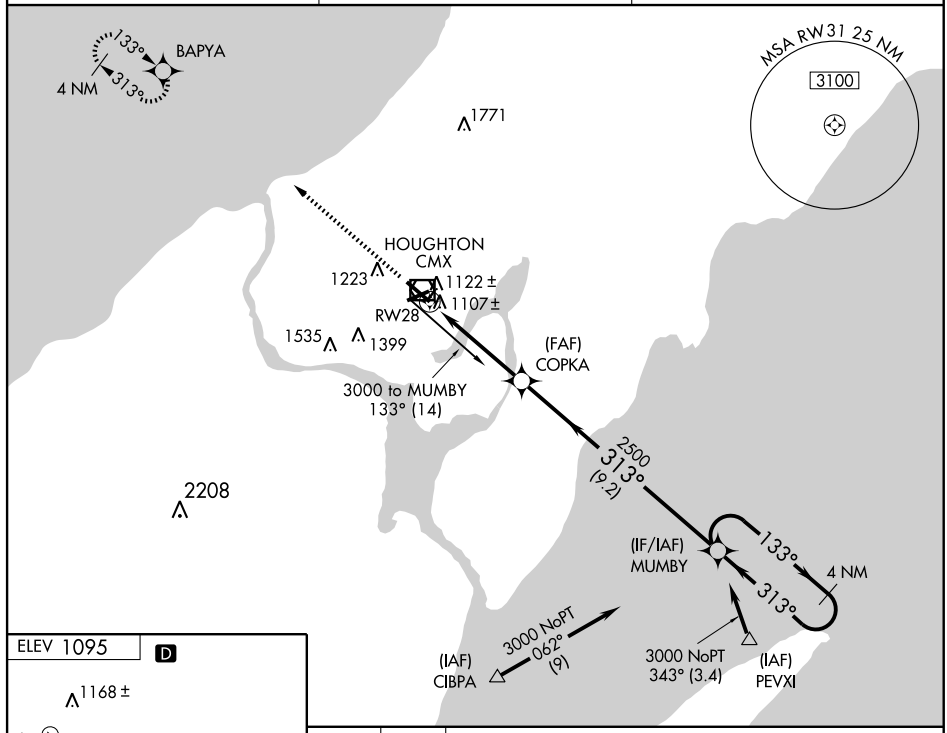
HANCOCK/HOUGHTON COUNTY MEMORIAL (CMX)

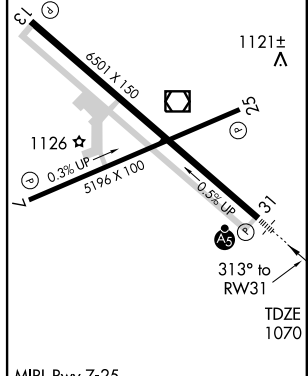
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. For inoperative MALSR, increase LPV visibility all Cats to 1 mile, increase LNAV/VNAV Cat D visibility to 1 mile. Inoperative table does not apply to LNAV Cat D.

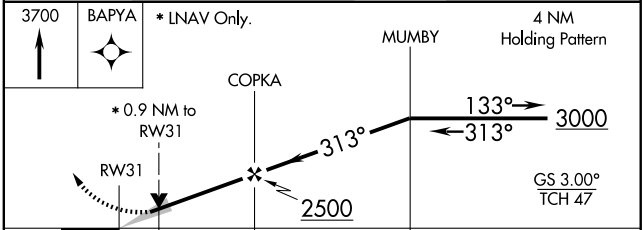
MALSR

MISSED APPROACH: Climb to 3700 direct BAPYA and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1320-½ 250 (300-½)			
LNAV/VNAV DA	1367-½ 297 (300-½)			1367-¾ 297 (300-¾)
LNAV MDA	1380-½ 310 (300-½)			1380-1 310 (300-1)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)

MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

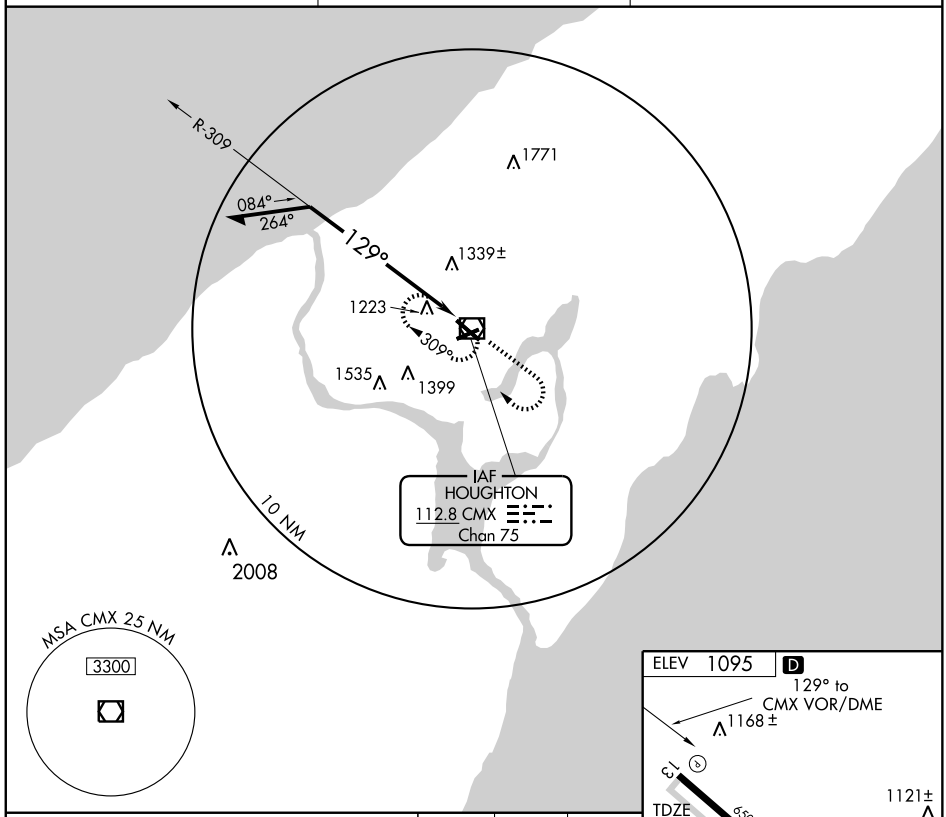
VOR/DME CMX	APP CRS	Rwy ldg	6501
112.8	129°	TDZE	1095
Chan 75		Apt Elev	1095

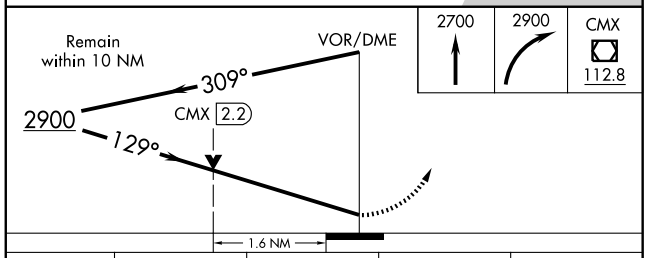
VOR RWY 13

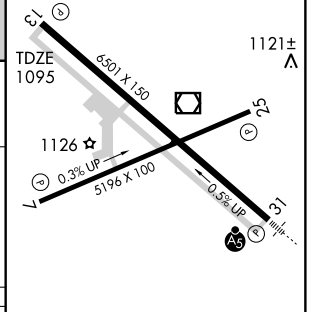
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

MISSED APPROACH: Climb to 2700, then climbing right turn to 2900 direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







CATEGORY	A	B	C	D
S-13	1640-1	545 (600-1)	1640-1½ 545 (600-1½)	1640-1¾ 545 (600-1¾)
CIRCLING	1640-1	545 (600-1)	1640-1½ 545 (600-1½)	1700-2 605 (700-2)

MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

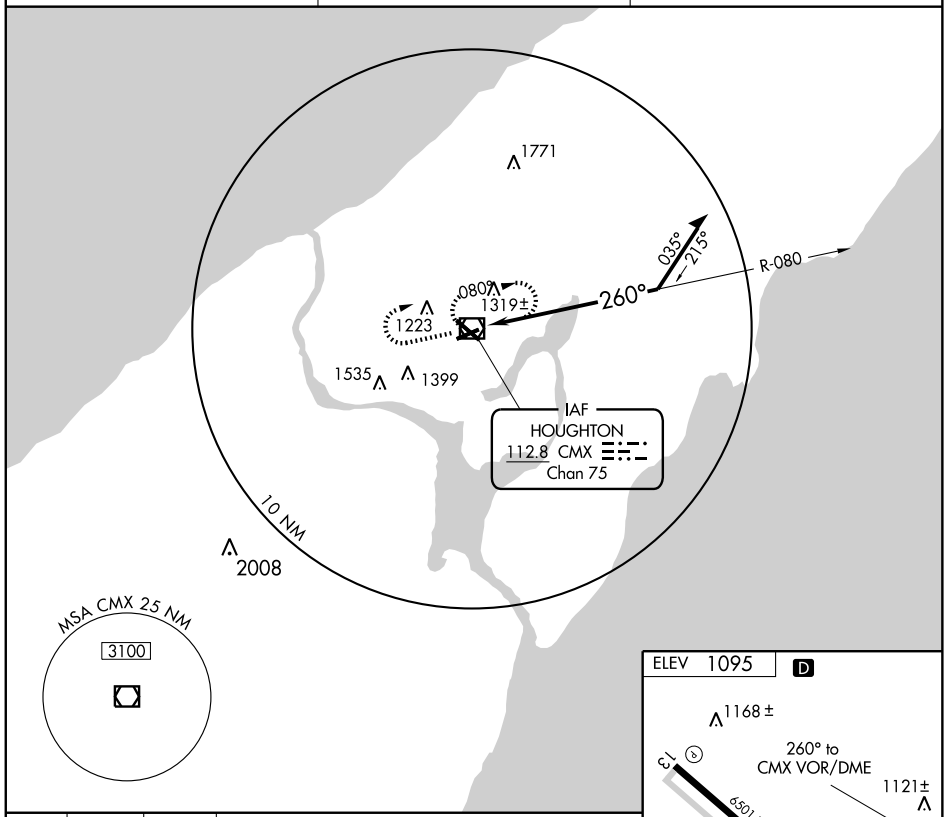
VOR/DME CMX	APP CRS	Rwy ldg	5196
112.8	260°	TDZE	1074
Chan 75		Apt Elev	1095

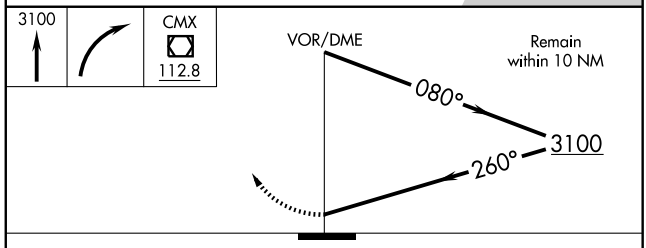
VOR RWY 25

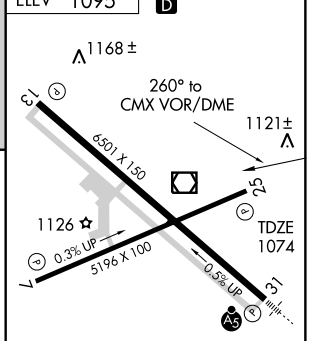
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

MISSED APPROACH: Climb to 3100, then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

CATEGORY	A	B	C	D
S-25	1620-1 546 (600-1)		1620-1½ 546 (600-1½)	1620 1¾ 546 (600-1¾)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME CMX 112.8 Chan 75	APP CRS 320°	Rwy ldg 6501 TDZE 1070 Apt Elev 1095

VOR RWY 31

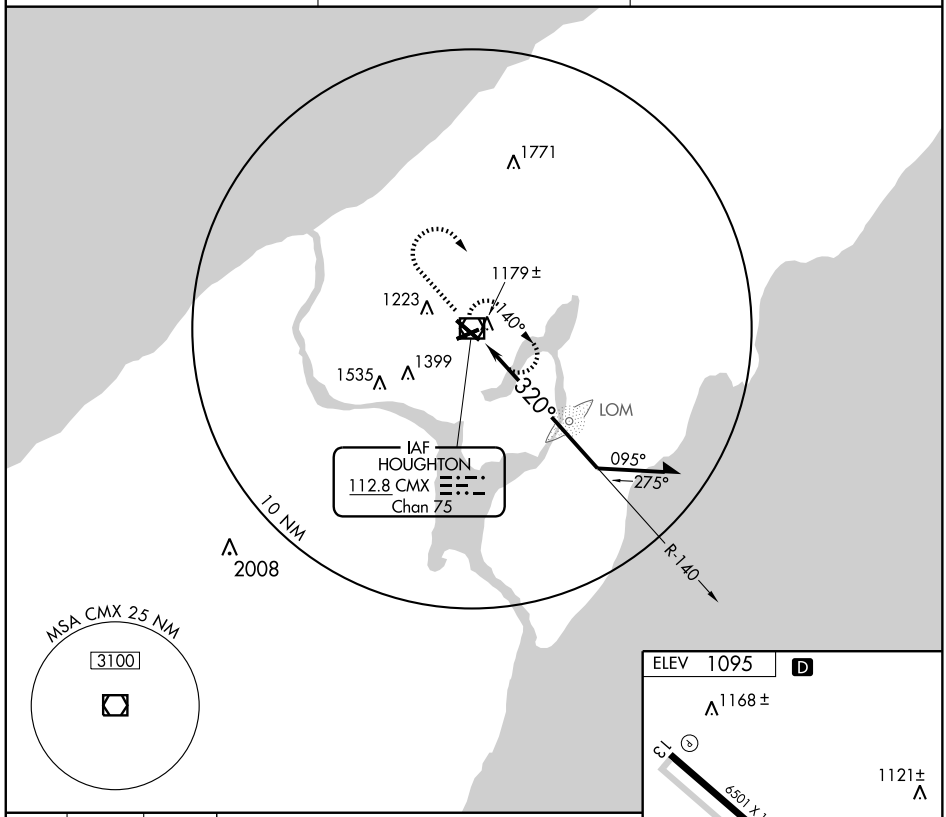
HANCOCK / HOUGHTON COUNTY MEMORIAL (CMX)

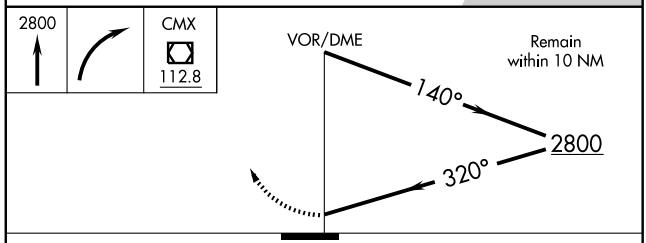
Request MIRL Rwy 7-25 CTAF.

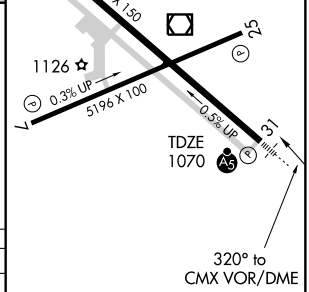
MALSR

MISSED APPROACH: Climb to 2800, then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	127.2 379.1	122.7 (CTAF) L







MIRL Rwy 7-25
REIL Rwys 13 and 25 L
HIRL Rwy 13-31 L

CATEGORY	A	B	C	D
S-31	1500-½ 430 (500-½)		1500-¾ 430 (500-¾)	1500-1 430 (500-1)
CIRCLING	1620-1 525 (600-1)	1640-1 545 (600-1)	1640-1½ 545 (600-1½)	1780-2¼ 685 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

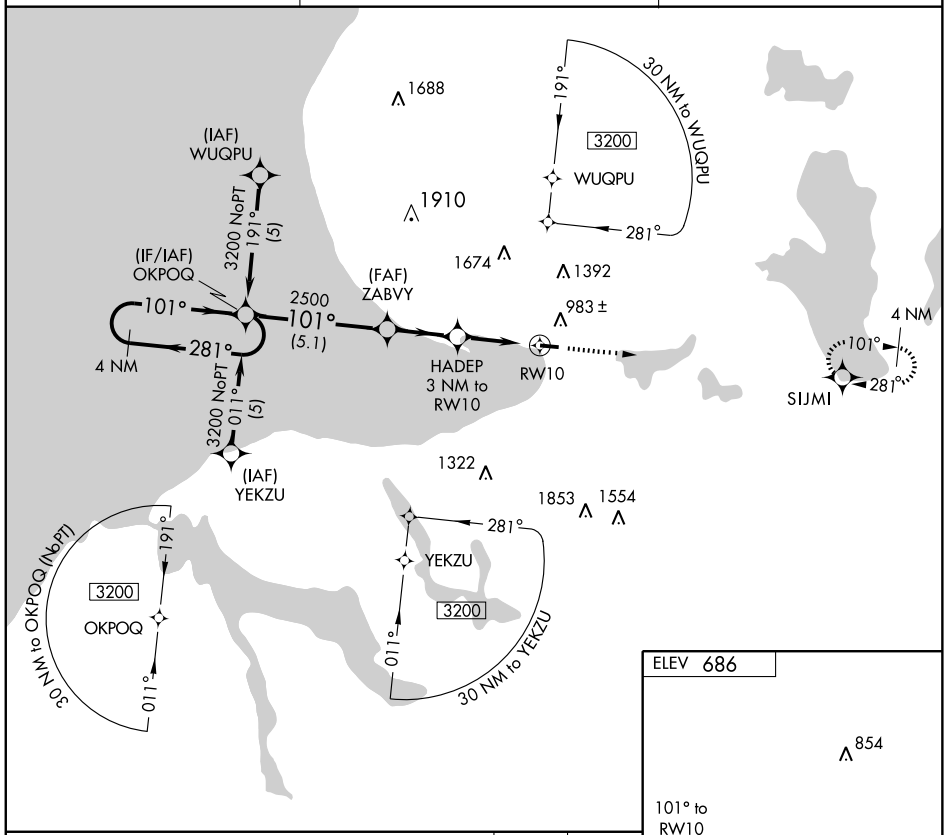
APP CRS	Rwy ldg	3712
101°	TDZE	679
	Apt Elev	686

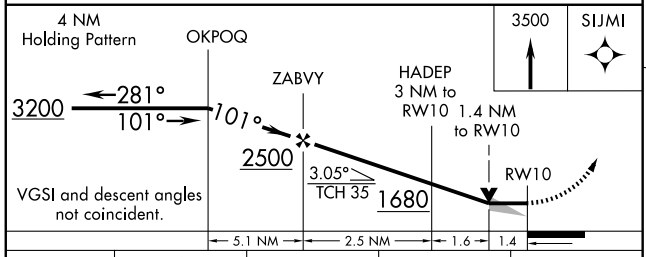
RNAV (GPS) RWY 10
HARBOR SPRINGS (MGN)

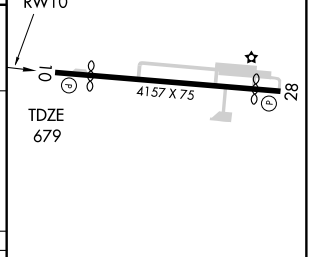
DME/DME RNP-0.3 NA. VDP NA when using Pellston altimeter setting. When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climb to 3500 direct SIJMI and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1240-1	561 (600-1)	NA	
CIRCLING	1380-1 694 (700-1)	1500-1¼ 814 (900-1¼)	NA	

MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

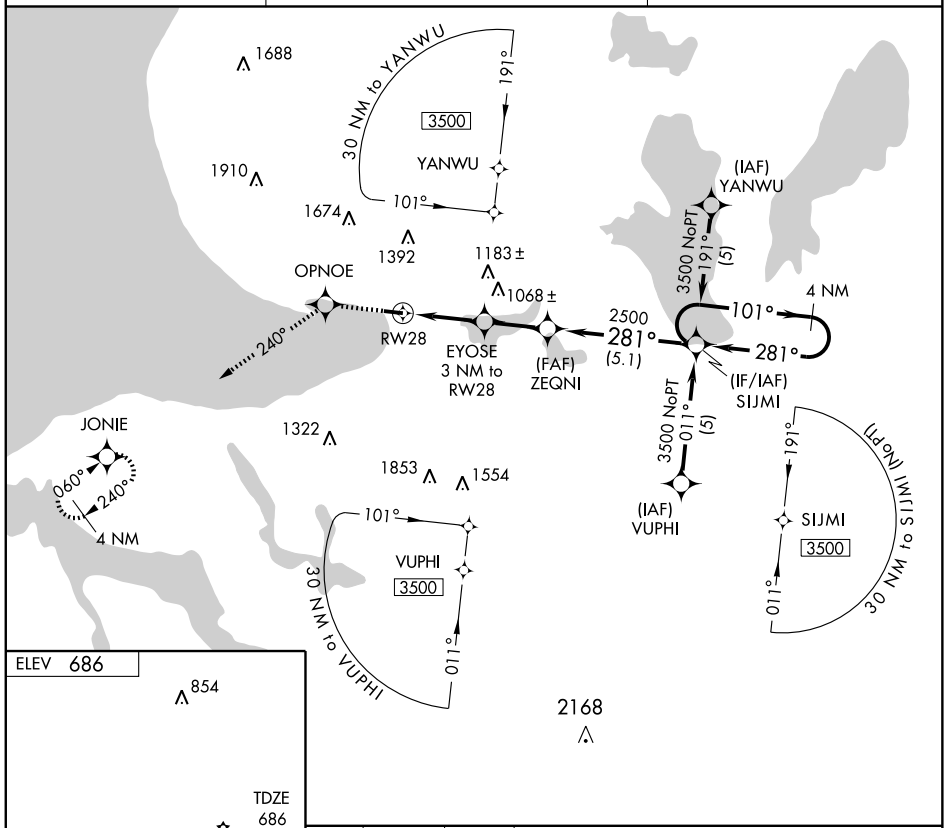
APP CRS	Rwy ldg	3712
281°	TDZE	686
	Apt Elev	686

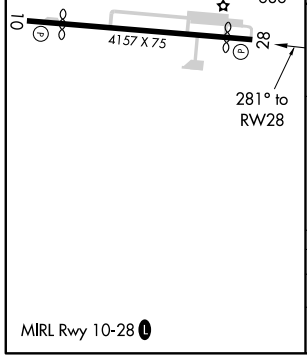
RNAV (GPS) RWY 28
HARBOR SPRINGS (MGN)

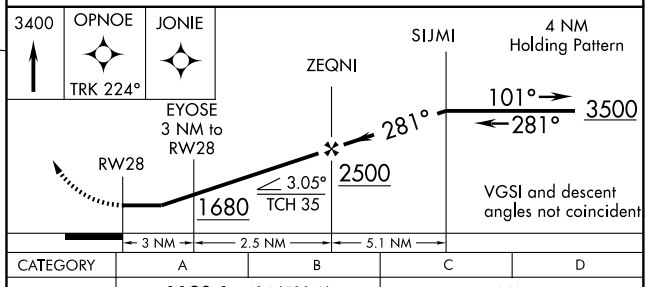
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climb to 3400 direct OPNOE and via 240° track to JONIE and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1120-1 434 (500-1)		NA	
CIRCLING	1380-1 694 (700-1)	1500-1¼ 814 (900-1¼)	NA	

MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

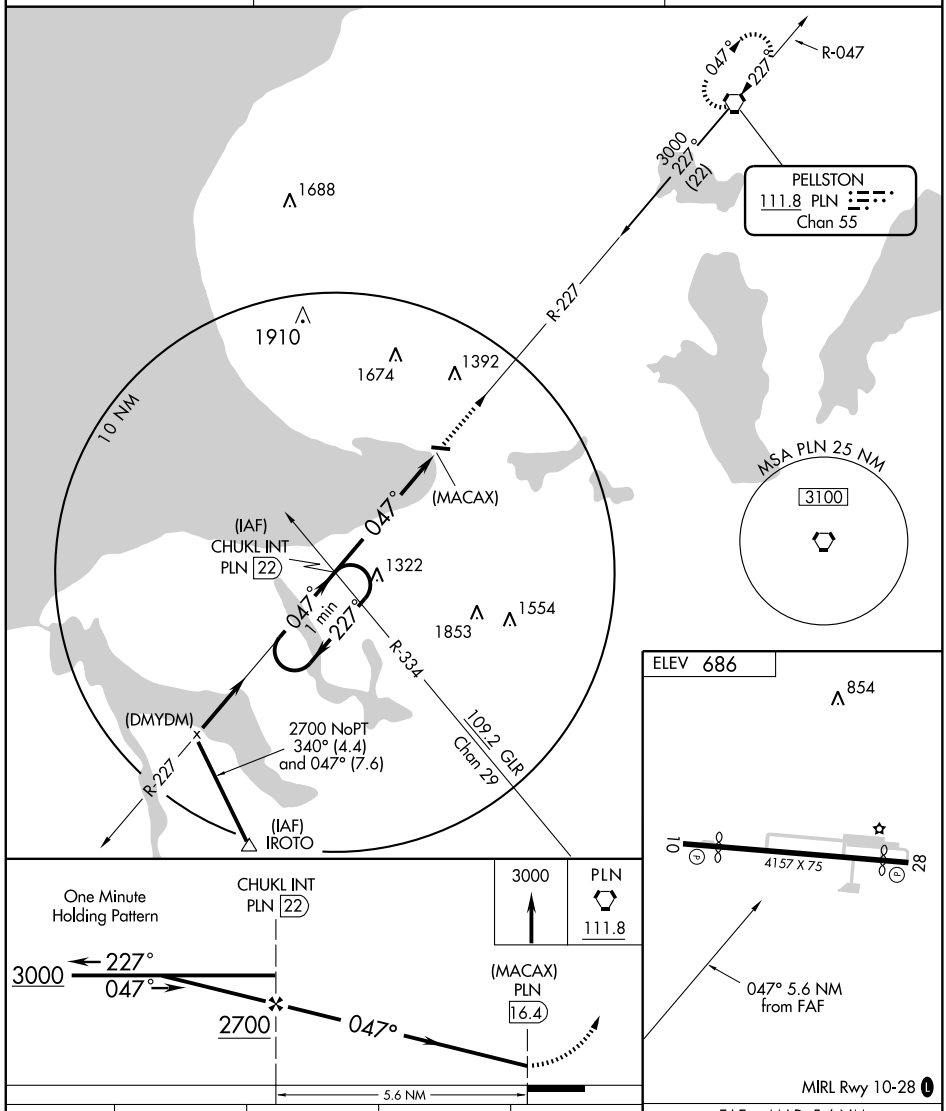
VORTAC PLN	APP CRS	Rwy ldg	N/A
111.8	047°	TDZE	N/A
Chan 55		Apt Elev	686

VOR or GPS-A
HARBOR SPRINGS (MGN)

Use Pellston altimeter setting.
NA Procedure not authorized at night.

MISSED APPROACH: Climb to 3000 direct PLN VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L



CATEGORY	A	B	C	D
CIRCLING	1660-1¼ 968 (1000-1¼)	1660-1½ 968 (1000-1½)	NA	

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

VOR/DME GRR 115.95 Chan 106 (Y)	APP CRS 142°	Rwy ldg 3900 TDZE 797 Apt Elev 801

VOR RWY 12
HASTINGS (9D9)

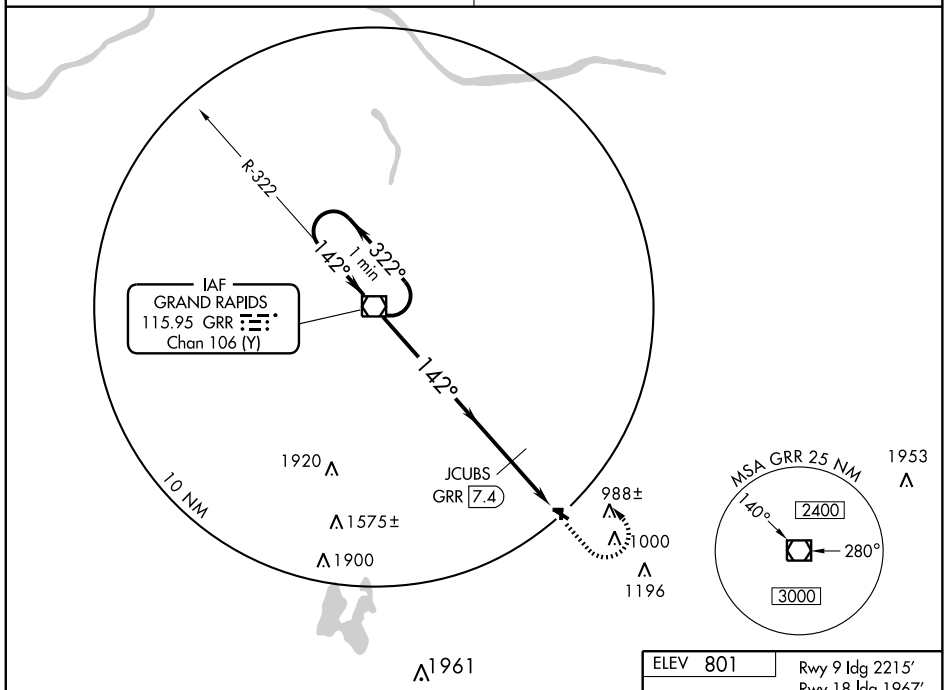
NA

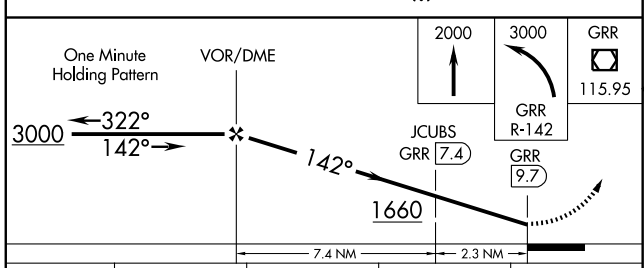
Use Grand Rapids altimeter setting.

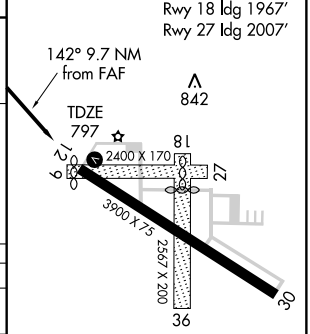
MISSED APPROACH: Climb to 2000, then climbing left turn to 3000 via GRR R-142 to GRR VOR/DME and hold.

GRAND RAPIDS APP CON ★
128.4 257.6

UNICOM
123.075 (CTAF) L







CATEGORY	A	B	C	D
S-12	1660-1 863 (900-1)	1660-1¼ 863 (900-1¼)	1660-2½ 863 (900-2½)	NA
CIRCLING	1660-1 859 (900-1)	1660-1¼ 859 (900-1¼)	1660-2½ 859 (900-2½)	NA
JCUBS DME MINIMUMS				
S-12	1340-1 543 (600-1)		1340-1½ 543 (600-1½)	NA
CIRCLING	1340-1 539 (600-1)		1340-1½ 539 (600-1½)	NA

MIRL Rwy 12-30 L
REIL Rwys 12 and 30 L

FAF to MAP 9.7 NM					
Knots	60	90	120	150	180
Min:Sec	9:42	6:28	4:51	3:53	3:14

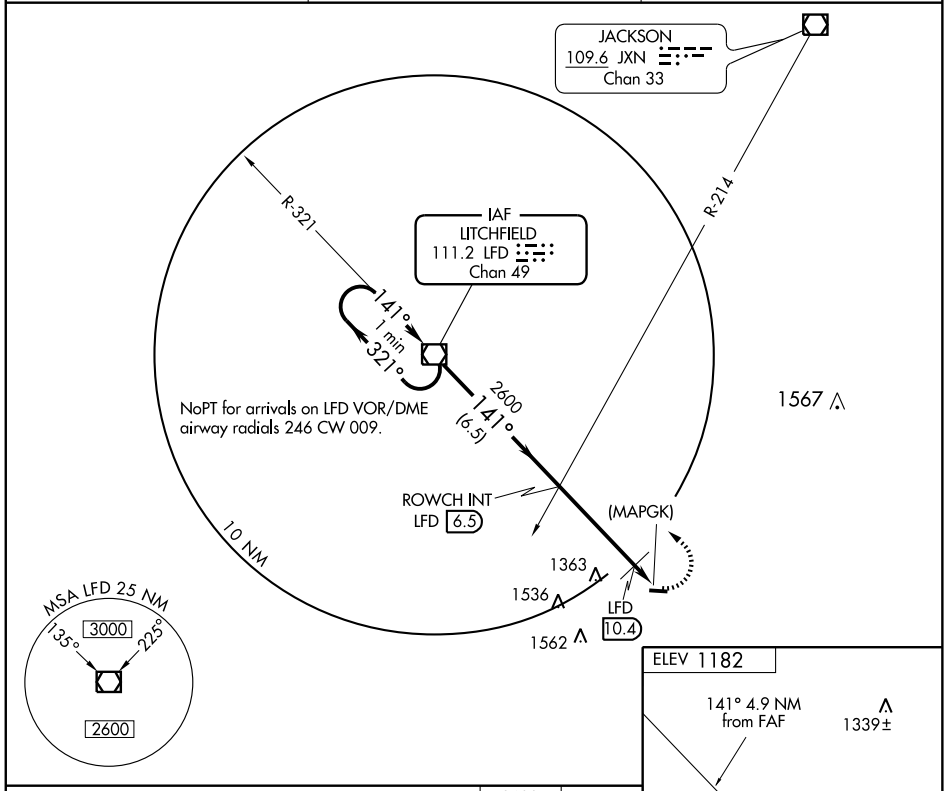
EC-1. 14 JAN 2010 to 11 FEB 2010

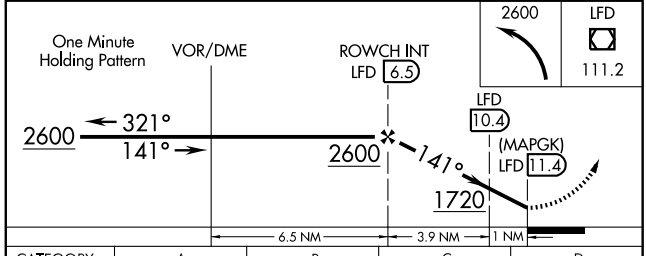
VOR/DME LFD 111.2 Chan 49	APP CRS 141°	Rwy ldg N/A TDZE N/A Apt Elev 1182

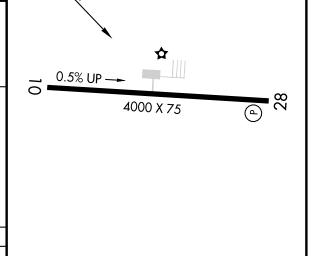
VOR or GPS-A
HILLSDALE MUNI (JYM)

MISSED APPROACH: Climbing left turn to 2600 direct LFD VOR/DME and hold.

AWOS-3	TOLEDO APP CON	UNICOM
121.025	134.35 317.55	122.8 (CTAF)







REIL Rwy 28
MIRL Rwy 10-28

CATEGORY	A	B	C	D
CIRCLING	1720-1 538 (600-1)		1720-1½ 538 (600-1½)	NA
DME MINIMUMS				
CIRCLING	1640-1 458 (500-1)		1640-1½ 458 (500-1½)	NA

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC/DME I-BIV	APP CRS	Rwy ldg	6002
110.55	264°	TDZE	686
Chan 42 (Y)		Apt Elev	698

ILS or LOC/DME RWY 26

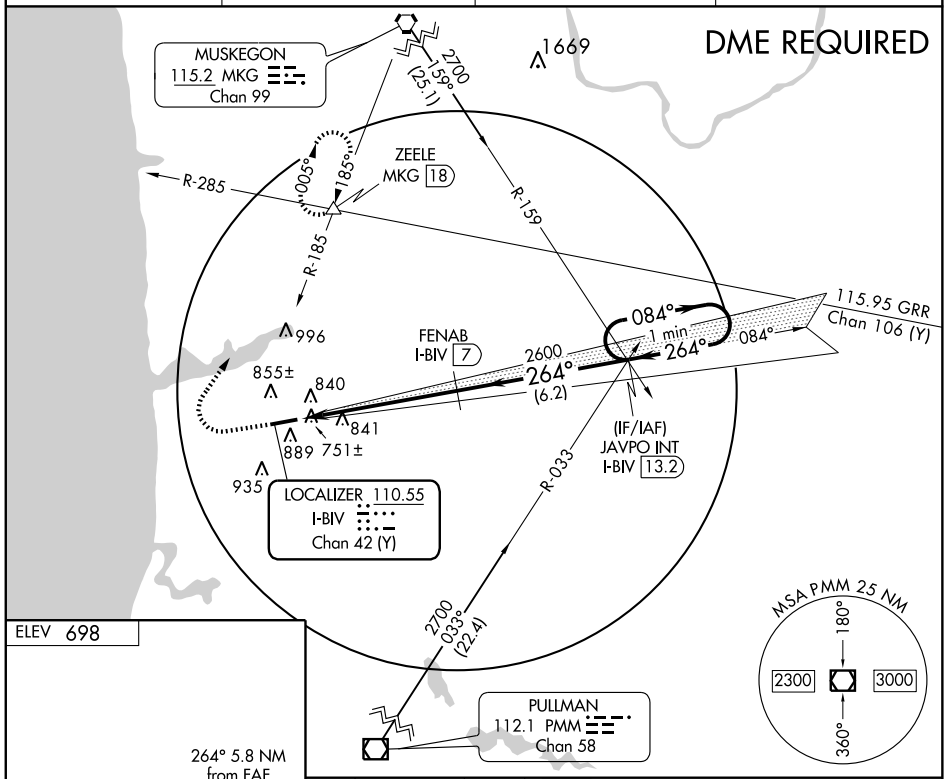
HOLLAND/ TULIP CITY (BIV)

T A NA For inoperative MALSR, increase all S-ILS 26 visibility to 1. When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 71 feet, all MDA 80 feet and S-ILS 26 Cats visibility ¼ mile, and S-LOC 26 Cat C visibility ¼ mile. For inopertive MALSR when using Muskegon altimeter setting, increase S-ILS 26 all Cats visibility to 1¼. VDP NA when using Muskegon altimeter setting.

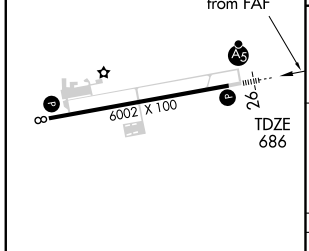
MALSR A5

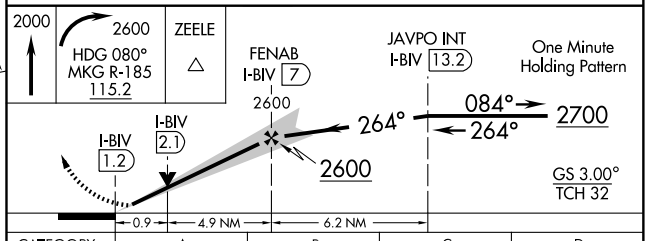
MISSED APPROACH: Climb to 2000 then climbing right turn to 2600 via heading 080° and MKG R-185 to ZEELE INT/ MKG 18 DME and hold.

ASOS	MUSKEGON APP CON★		MUSKEGON CLNC DEL	UNICOM
119.025	119.8	339.1	123.95	123.05 (CTAF) L



ELEV 698





CATEGORY	A	B	C	D
S-ILS 26	936-½ 250 (300-½)			NA
S-LOC 26	1020-½ 334 (400-½)			NA
CIRCLING	1200-1 502 (600-1)		1200-1½ 502 (600-1½)	NA

REIL Rwy 8 and 26 L
HIRL Rwy 8-26 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6002
084°	TDZE	698
	Apt Elev	698

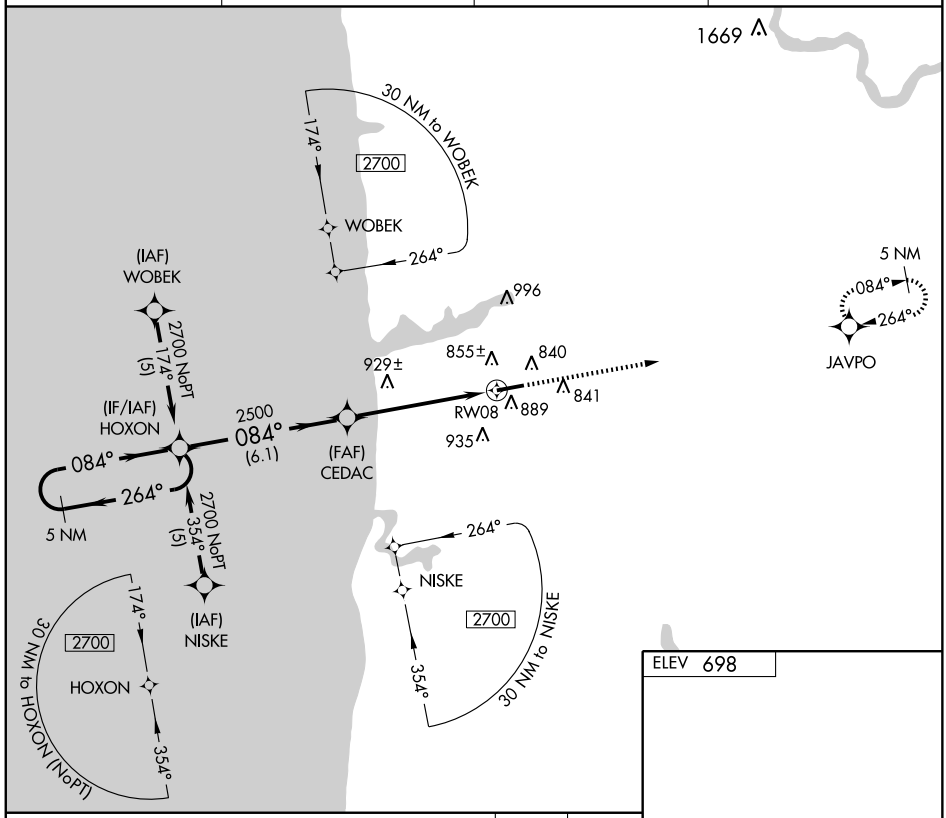
RNAV (GPS) RWY 8

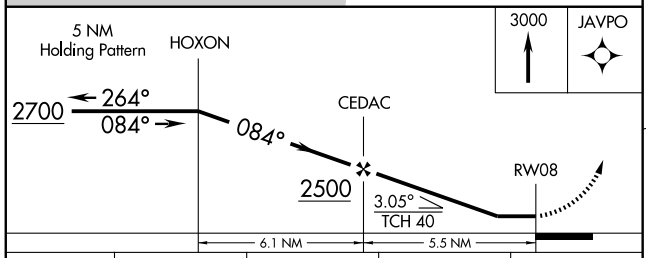
HOLLAND/ TULIP CITY (BIV)

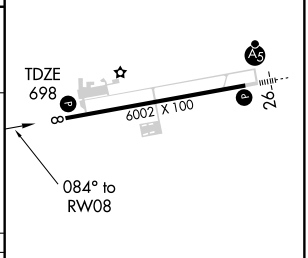
Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.
If local altimeter setting not received, use Muskegon County altimeter setting and increase all MDAs 80 feet.

MISSED APPROACH: Climb to 3000 direct JAVPO and hold.

ASOS	MUSKEGON APP CON ★		MUSKEGON CLNC DEL	UNICOM
119.025	119.8	339.1	123.95	123.05 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1180-1 482 (500-1)		1180-1¼ 482 (500-1¼)	1180-1½ 482 (500-1½)
CIRCLING	1200-1 502 (600-1)		1200-1½ 502 (600-1½)	1260-2 562 (600-2)

REIL Rwy 8 and 26 L
HIRL Rwy 8-26 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 53402 W26A	APP CRS 264°	Rwy ldg 6002 TDZE 686 Apt Elev 698

RNAV (GPS) RWY 26

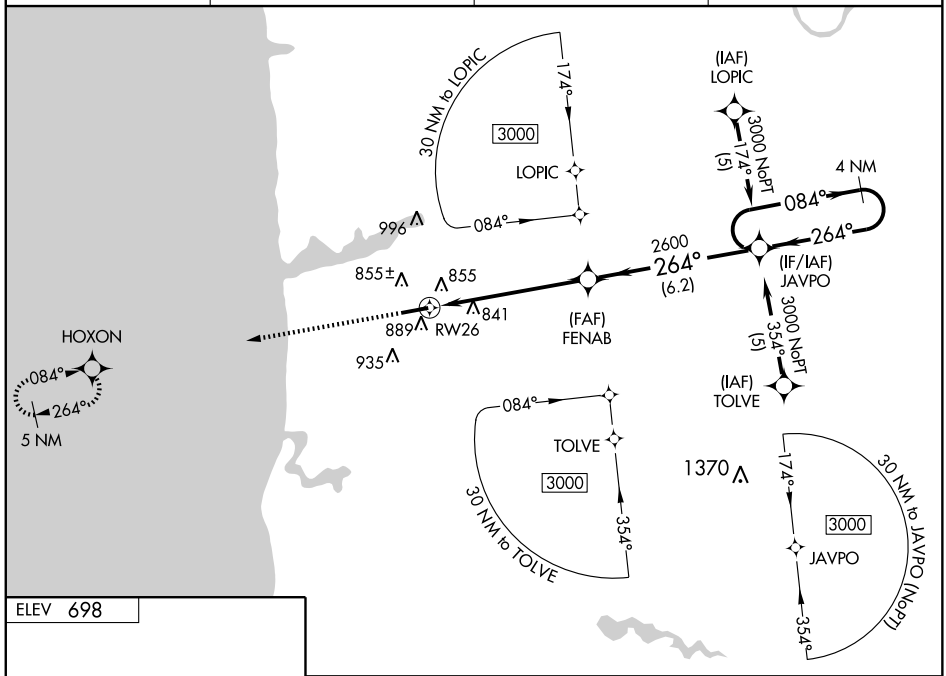
HOLLAND/ TULIP CITY (BIV)

For inoperative MALSR, increase LPV all Cats visibility to 1. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Muskegon altimeter setting. When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 71 feet and all MDA 80 feet; increase all LPV, LNAV-VNAV and LNAV Cat C visibility ¼ mile. For inoperative MALSR, when using Muskegon altimeter setting, increase LPV all Cats visibility to 1¼ .

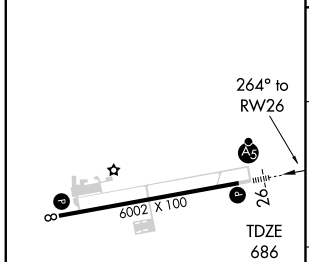
MALSR

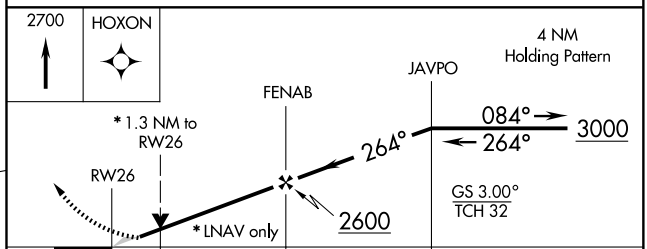
MISSED APPROACH: Climb to 2700 direct HOXON and hold.

ASOS	MUSKEGON APP CON *	MUSKEGON CLNC DEL	UNICOM
119.025	119.8 339.1	123.95	123.05 (CTAF) L



ELEV 698





CATEGORY	A	B	C	D
LPV DA	951-½ 265 (300-½)			NA
LNAV/ VNAV DA	1175-1¼ 489 (500-1¼)			NA
LNAV MDA	1140-½ 454 (500-½)		1140-¾ 454 (500-¾)	NA
CIRCLING	1200-1 502 (600-1)		1200-1½ 502 (600-1½)	NA

REIL Rwy 8 and 26 L
HIRL Rwy 8-26 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME PMM 112.1 Chan 58	APP CRS 360°	Rwy ldg N/A TDZE N/A Apt Elev 688

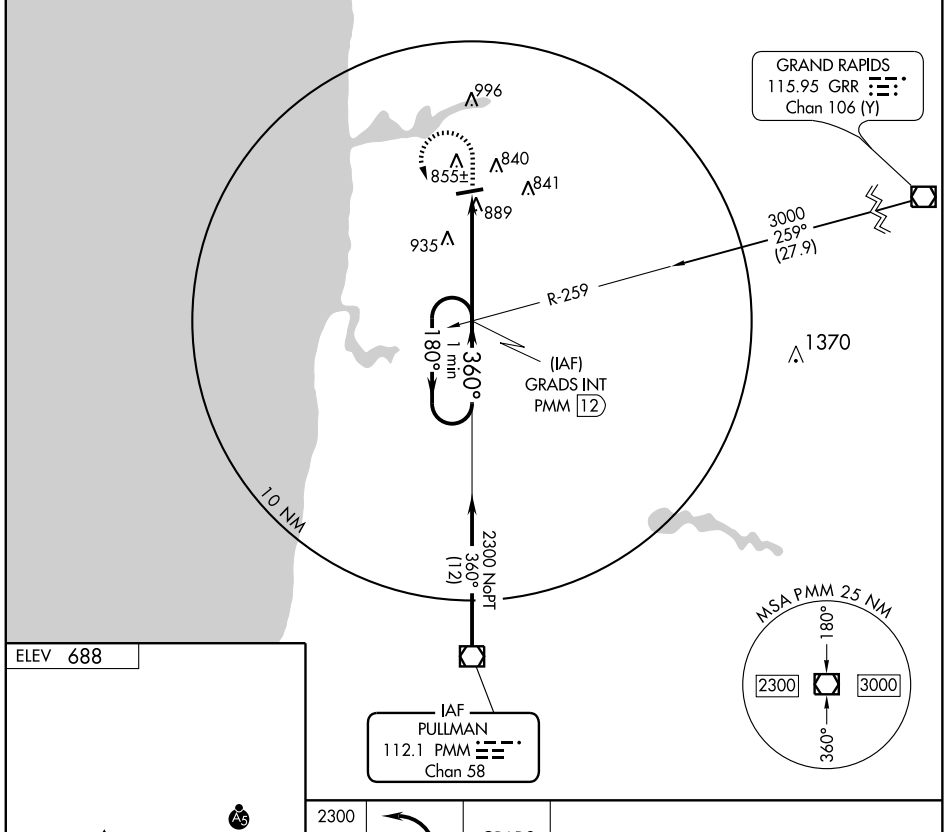
VOR-A

HOLLAND/ TULIP CITY (BIV)

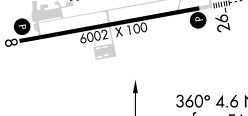
NA

MISSED APPROACH: Climb to 2300 then left turn via PMM R-360 to GRADS INT/PMM 12 DME and hold.

ASOS	MUSKEGON APP CON ★	MUSKEGON CLNC DEL	UNICOM
119.025	119.8 339.1	123.95	123.05 (CTAF) L

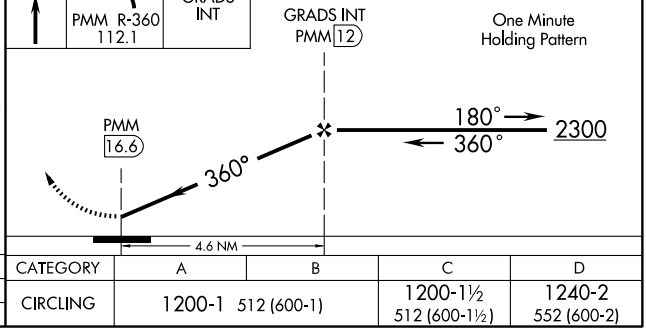


ELEV 688



360° 4.6 NM from FAF

REIL Rwy 8 and 26 L
HIRL Rwy 8-26 L



FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

CATEGORY	A	B	C	D
CIRCLING	1200-1 512 (600-1)		1200-1½ 512 (600-1½)	1240-2 552 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
094°	TDZE	1150
	Apt Elev	1150

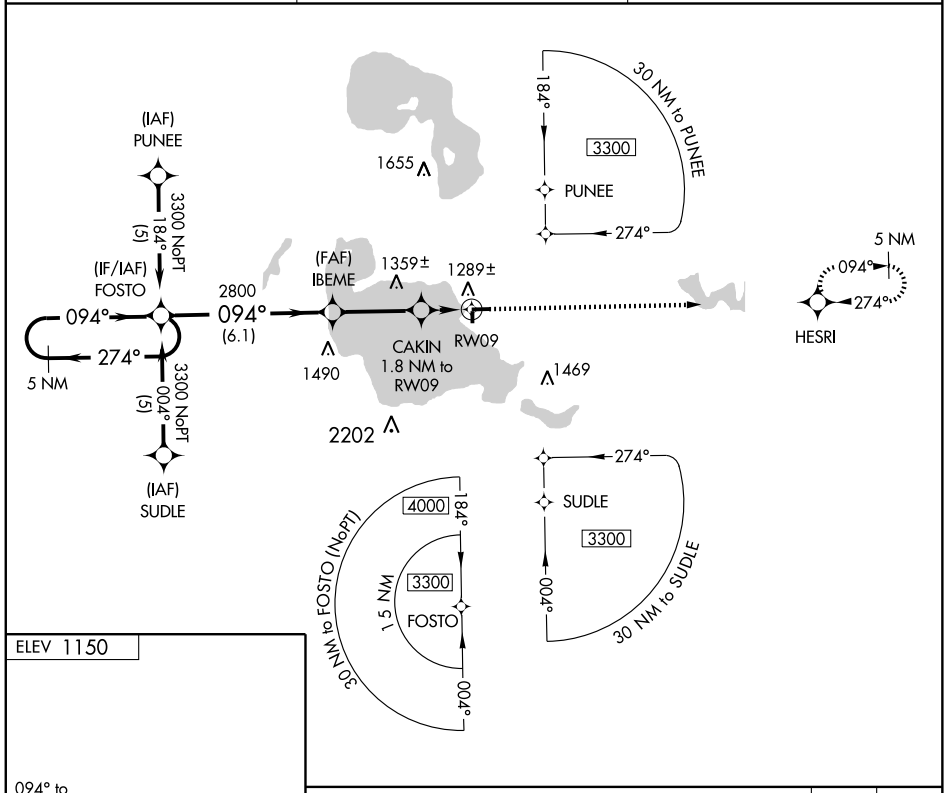
RNAV (GPS) RWY 9

HOUGHTON LAKE/ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

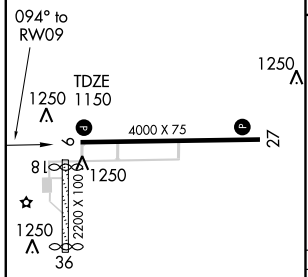
DME/DME RNP-0.3 NA. Circling NA at night.
Visibility reduction by helicopters NA.
If local altimeter setting not received, use Gaylord altimeter setting and increase all MDAs 120 feet.

MISSED APPROACH: Climb to 3300 direct HESRI and hold.

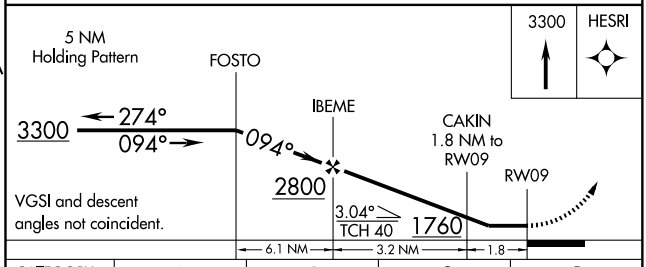
ASOS	MINNEAPOLIS CENTER	UNICOM
111.6	132.9 398.9	122.8 (CTAF) L



ELEV 1150



HIRL Rwy 9-27 L
REIL Rwys 9 and 27 L



CATEGORY	A	B	C	D
LNAV MDA	1540-1 390 (400-1)			1540-1¼ 390 (400-1¼)
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
274°	TDZE	1145
	Apt Elev	1150

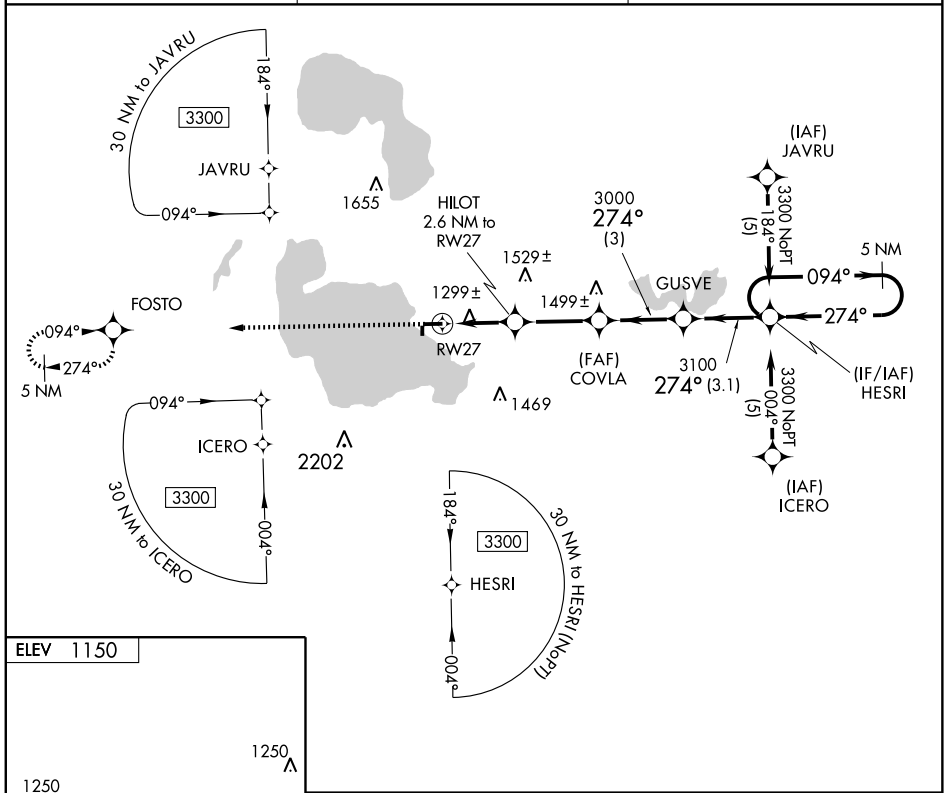
HOUGHTON LAKE/
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

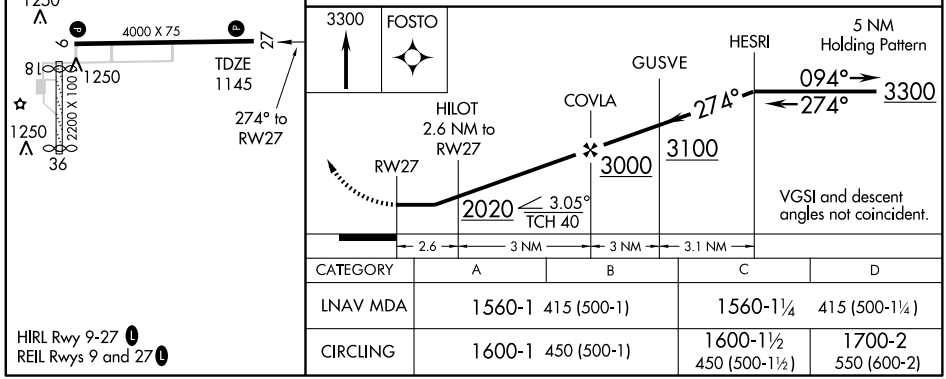
RNAV (GPS) RWY 27

DME/DME RNP-0.3 NA. Circling NA at night.
Visibility reduction by helicopters NA.
If local altimeter setting not received, use Gaylord altimeter setting and increase all MDAs 120 feet.

MISSED APPROACH: Climb to 3300 direct FOSTO and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
111.6	132.9 398.9	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1560-1 415 (500-1)		1560-1¼ 415 (500-1¼)	
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

HIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME HTL	APP CRS	Rwy ldg	4000
111.6	103°	TDZE	1150
Chan 53		Apt Elev	1150

HOUGHTON LAKE/
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

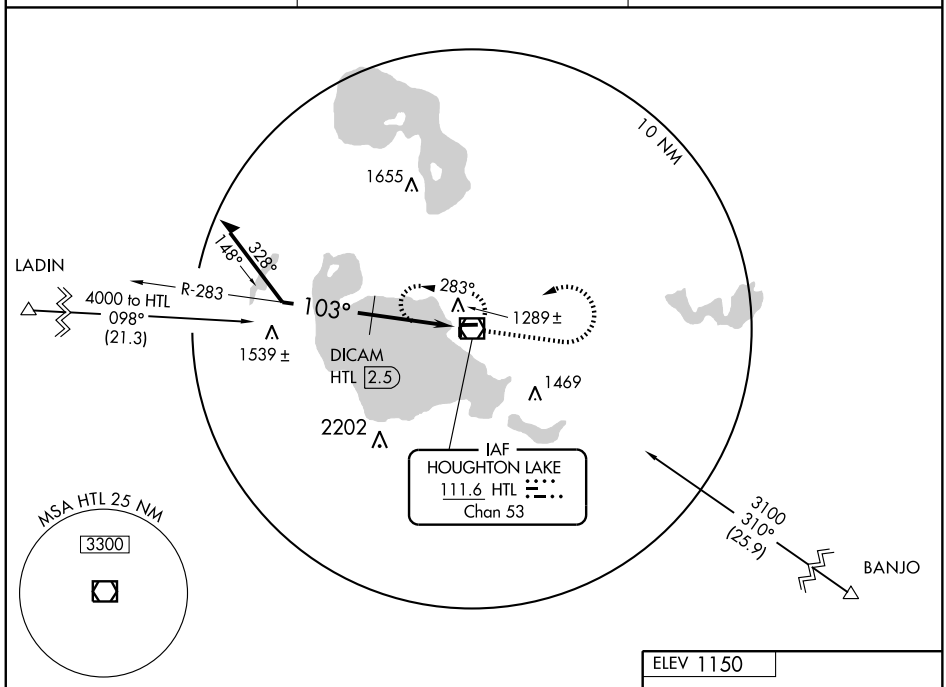
VOR RWY 9

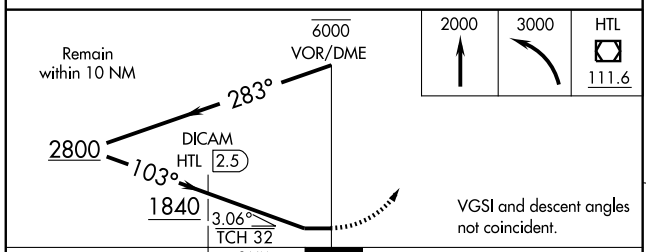
If local altimeter setting not received, procedure NA.
Visibility reduction by helicopters NA.
Circling NA at night.

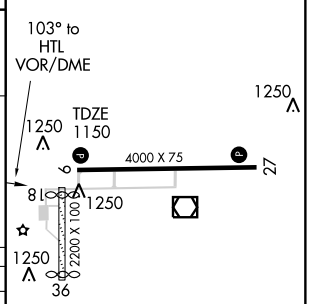
NA

MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct HTL VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
111.6	132.9 398.9	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-9	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2¼ 690 (700-2¼)
CIRCLING	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2¼ 690 (700-2¼)
DICAM FIX MINIMUMS (DME REQUIRED)				
S-9	1540-1 390 (400-1)			1540-1¼ 390 (400-1¼)
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

HIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME HTL	APP CRS	Rwy ldg	4000
111.6	262°	TDZE	1145
Chan 53		Apt Elev	1150

HOUGHTON LAKE/
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

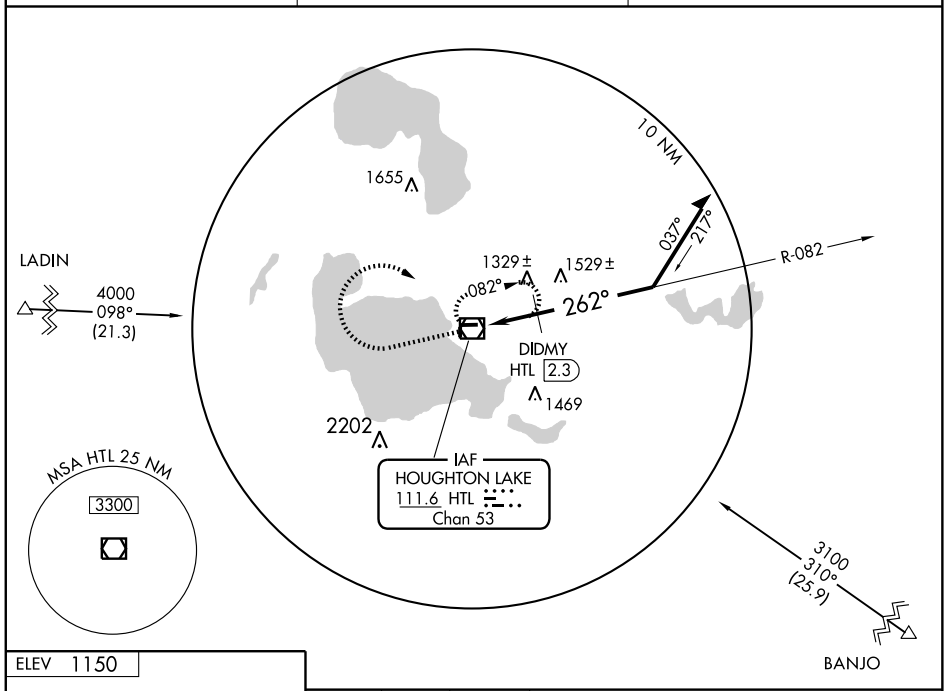
VOR RWY 27

NA

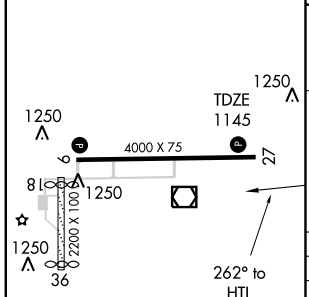
If local altimeter setting not received, procedure NA.
Visibility reduction by helicopters NA.
Circling NA at night.

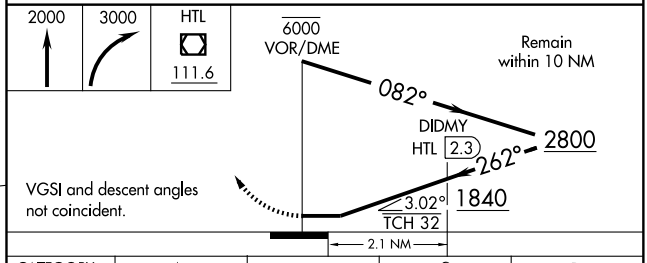
MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct HTL VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
111.6	132.9 398.9	122.8 (CTAF) L



ELEV 1150





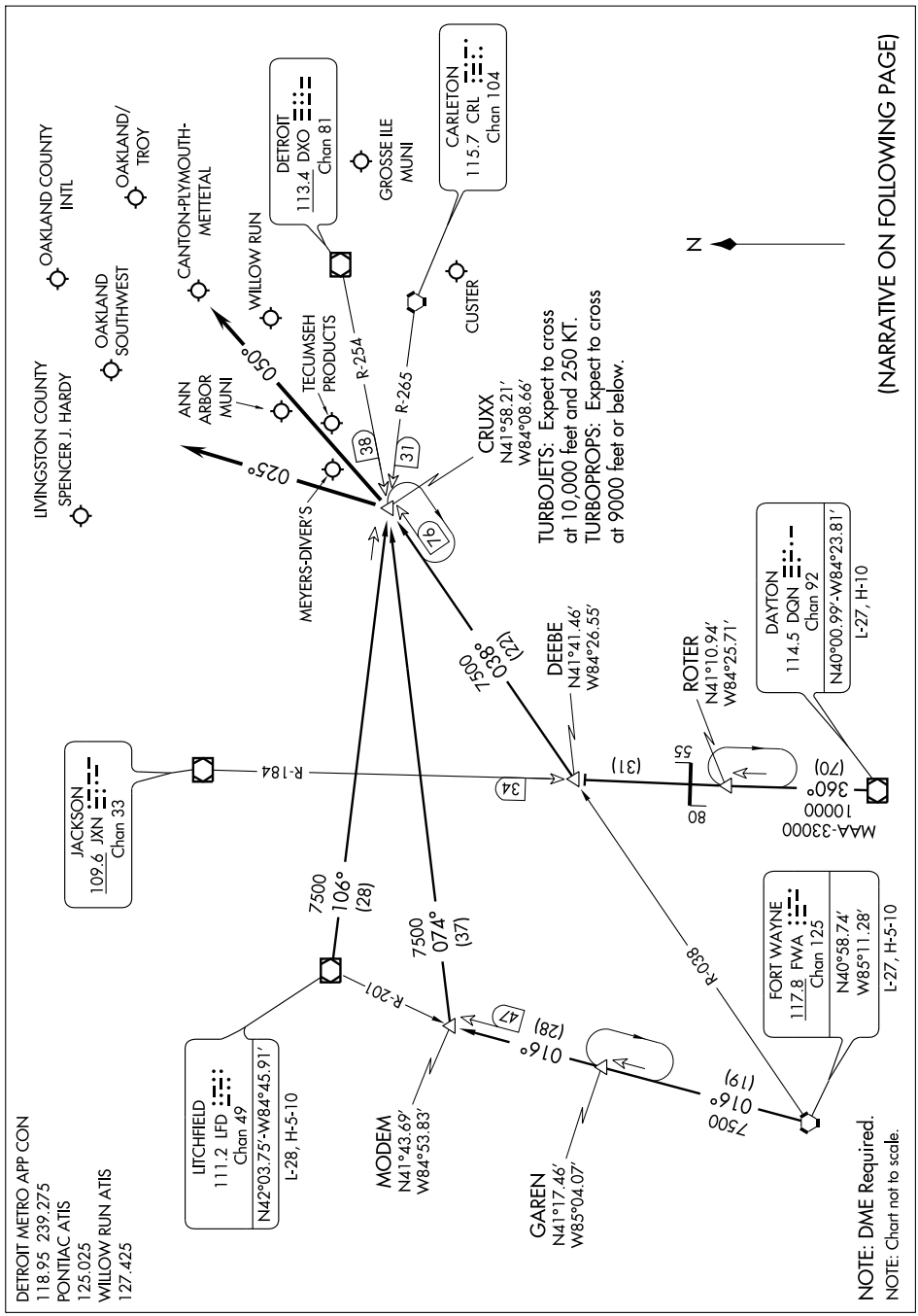
CATEGORY	A	B	C	D
S-27	1840-1 695 (700-1)		1840-2 695 (700-2)	1840-2 ¼ 695 (700-2¼)
CIRCLING	1840-1 690 (700-1)		1840-2 690 (700-2)	1840-2 ¼ 690 (700-2¼)
DIDMY FIX MINIMUMS (DME REQUIRED)				
S-27	1580-1 435 (500-1)		1580-1¼ 435 (500-1¼)	1580-1 ½ 435 (500-1½)
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

HIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

LOC/DME I-OGO	APP CRS	Rwy ldg	5002
108.55	132°	TDZE	962
Chan 22 (Y)		Apt Elev	962

ILS or LOC RWY 13

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

T

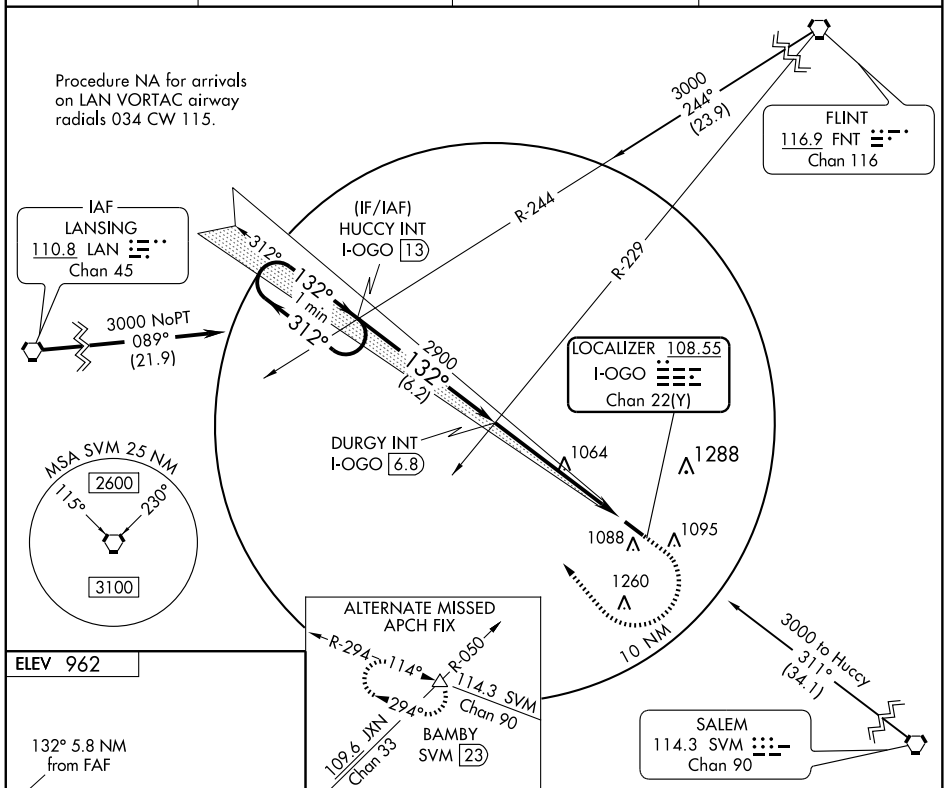
NA

If local altimeter setting not received, use Bishop Intl altimeter setting and increase all DAs/MDAs 80 feet.

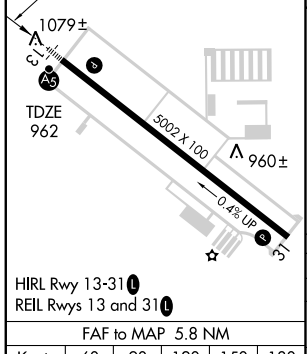
MALSR

MISSED APPROACH: Climb to 1600 then climbing right turn to 3000 via heading 356° and I-OGO NW course to HUCCY Int/I-OGO 13 DME and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	127.5 363.2	121.725 (GCO)	123.0 (CTAF) L

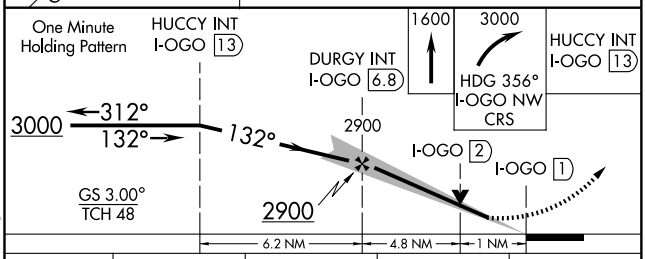


ELEV 962



HIRL Rwy 13-31 L
REIL Rwys 13 and 31 L

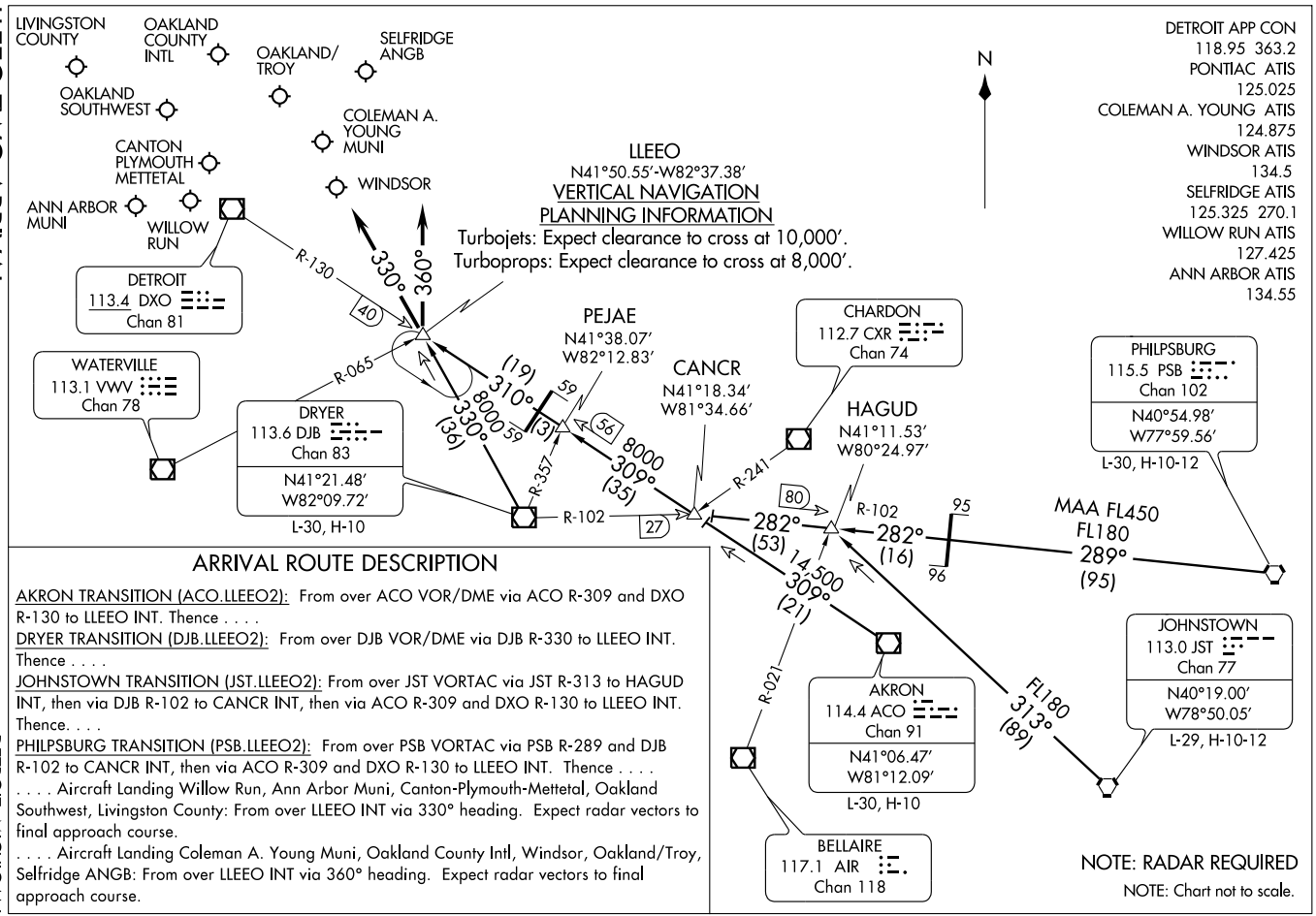
FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56



CATEGORY	A	B	C	D
S-ILS 13	1162-½ 200 (200-½)			
S-LOC 13	1320-½ 358 (400-½)			1320-¾ 358 (400-¾)
CIRCLING	1460-1 498 (500-1)		1460-1½ 498 (500-1½)	1520-2 558 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

NDB OZW	APP CRS	Rwy ldg	5002
243	119°	TDZE	962
		Apt Elev	962

NDB RWY 13

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

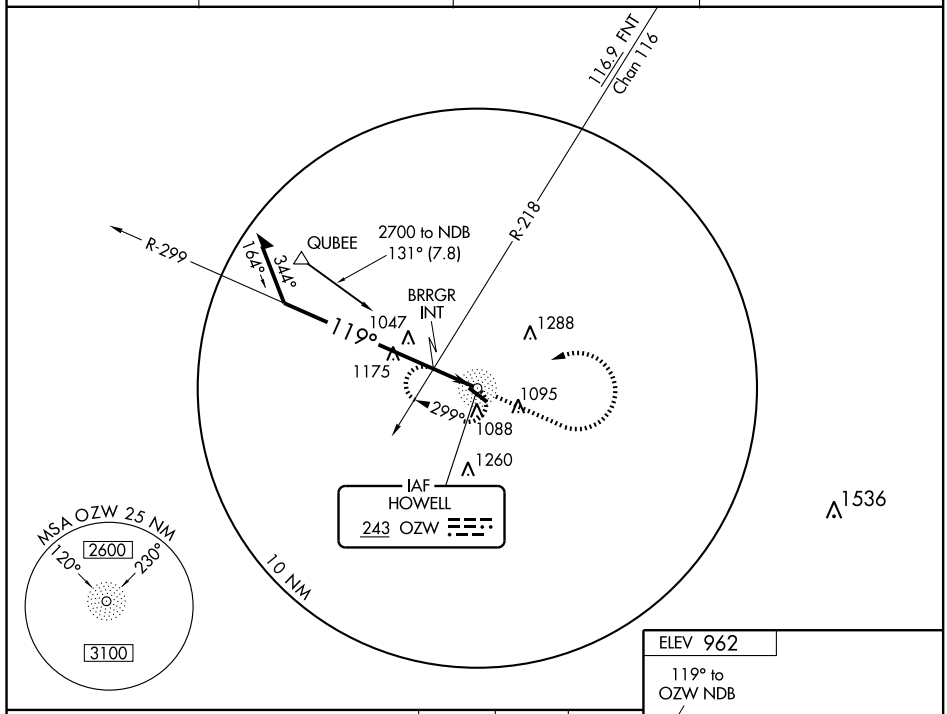
If local altimeter setting not received, use Bishop Intl altimeter setting and increase all MDAs 80 feet. Visibility reduction by helicopters NA.BRRGR FIX minimums NA when using Bishop Intl altimeter setting.

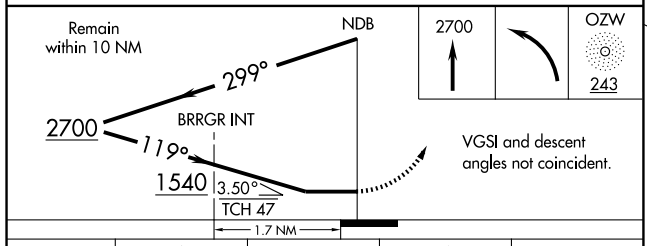
NA

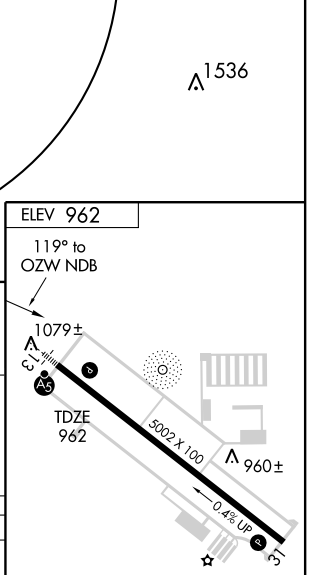
MALSR

MISSED APPROACH: Climb to 2700 then left turn direct OZW NDB and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	127.5 363.2	121.725 (GCO)	123.0 (CTAF) L







HIRL Rwy 13-31 L
REIL Rwys 13 and 31 L

CATEGORY	A	B	C	D
S-13	1540-1 578 (600-1)		1540-1½ 578 (600-1½)	1540-1¾ 578 (600-1¾)
CIRCLING	1540-1 578 (600-1)		1540-1½ 578 (600-1½)	1540-2 578 (600-2)
BRRGR FIX MINIMUMS				
S-13	1380-1 418 (500-1)		1380-1¼ 418 (500-1¼)	
CIRCLING	1460-1 498 (500-1)		1460-1½ 498 (500-1½)	1520-2 558 (600-2)

Knots	60	90	120	150	180
Min:Sec					

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 69601 W13A	APP CRS 132°	Rwy ldg 5002 TDZE 962 Apt Elev 962

RNAV (GPS) RWY 13

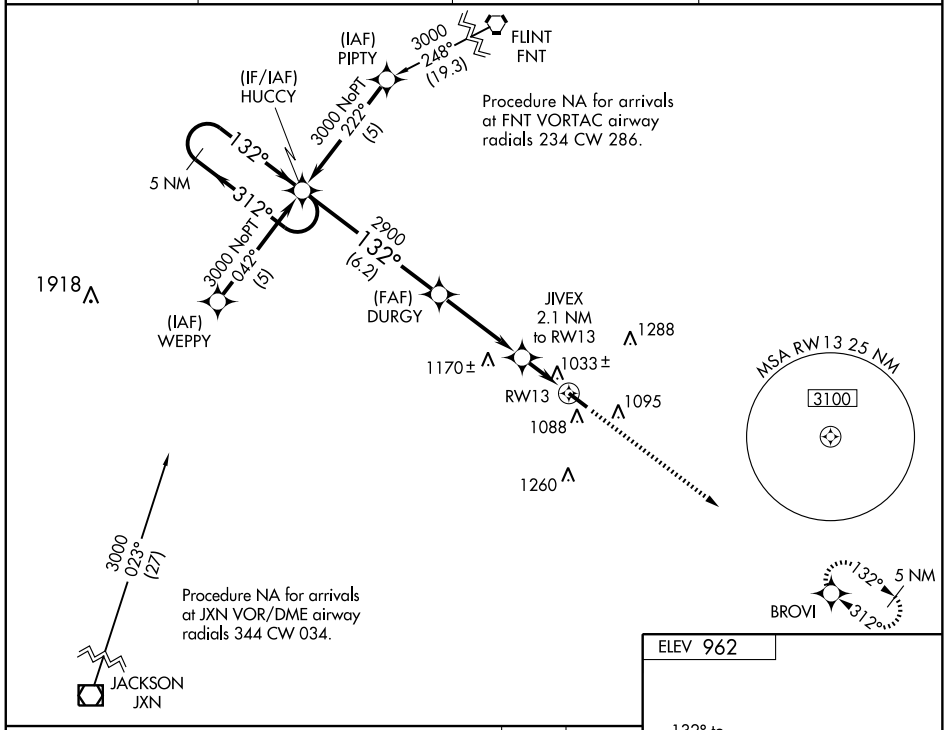
HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

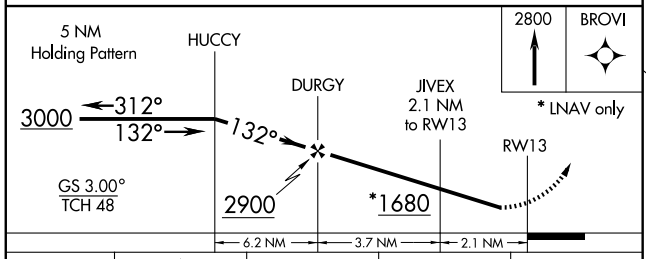
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Bishop Intl altimeter setting and increase all DAs/MDAs 80 feet. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (117°F). Visibility reduction by helicopters NA. Baro-VNAV NA when using Bishop Intl altimeter setting.

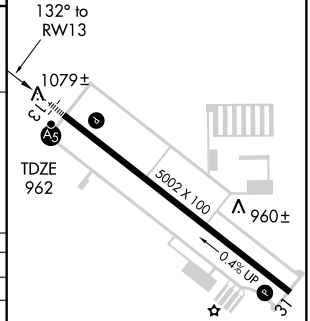
MALSR

MISSED APPROACH: Climb to 2800 direct BROVI and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	127.5 363.2	121.725 (GCO)	123.0 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1244-1 282 (300-1)			
LNAV/ VNAV DA	1324-1¼ 362 (400-1¼)			
LNAV MDA	1300-1 338 (400-1)			
CIRCLING	1460-1¼ 498 (500-1¼)		1460-1½ 498 (500-1½)	1520-2 558 (600-2)

HIRL Rwy 13-31 L
REIL Rwys 13 and 31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5002
312°	TDZE	943
	Apt Elev	962

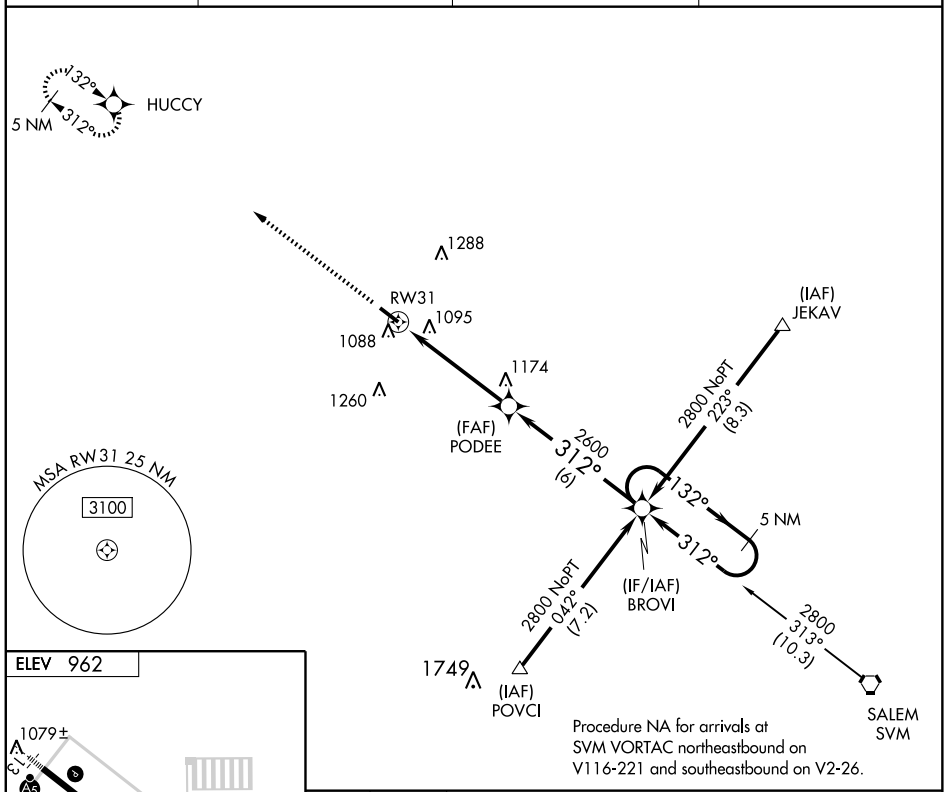
RNAV (GPS) RWY 31

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

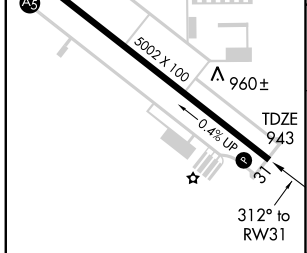
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Bishop Intl altimeter setting and increase all MDAs 80 feet.

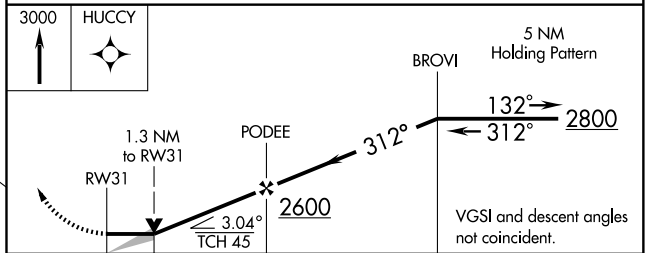
MISSED APPROACH: Climb to 3000 direct HUCCY and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	127.5 363.2	121.725 (GCO)	123.0 (CTAF) L



Procedure NA for arrivals at SVM VORTAC northeastbound on V116-221 and southeastbound on V2-26.





CATEGORY	A	B	C	D
LNAV MDA	1400-1 457 (500-1)		1400-1¼ 457 (500-1¼)	1400-1½ 457 (500-1½)
CIRCLING	1460-1 498 (500-1)		1460-1½ 498 (500-1½)	1520-2 558 (600-2)

HIRL Rwy 13-31 L
REIL Rwys 13 and 31 L

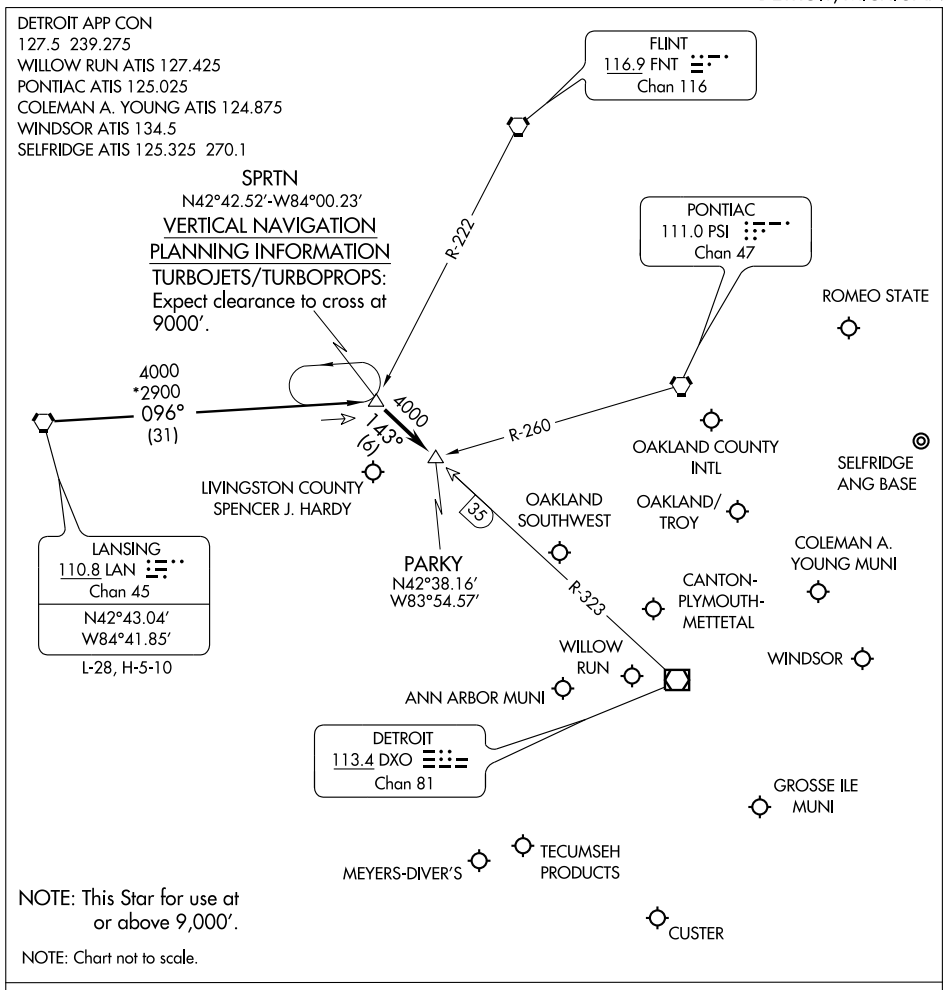
EC-1. 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

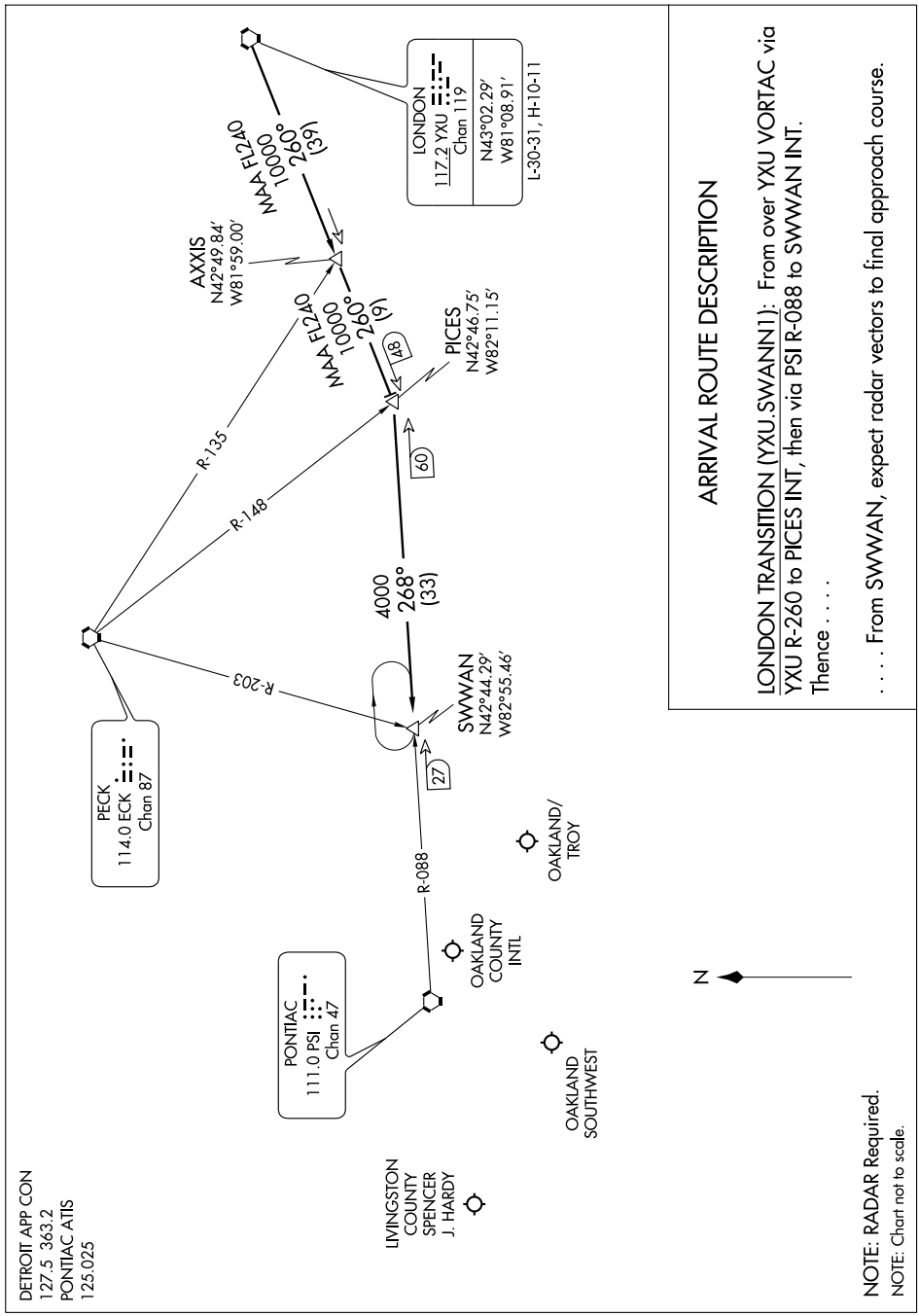
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

SWWAN ONE ARRIVAL

PONTIAC, MICHIGAN



VORTAC SVM	APP CRS	Rwy ldg	5002
114.3	311°	TDZE	943
Chan 90		Apt Elev	962

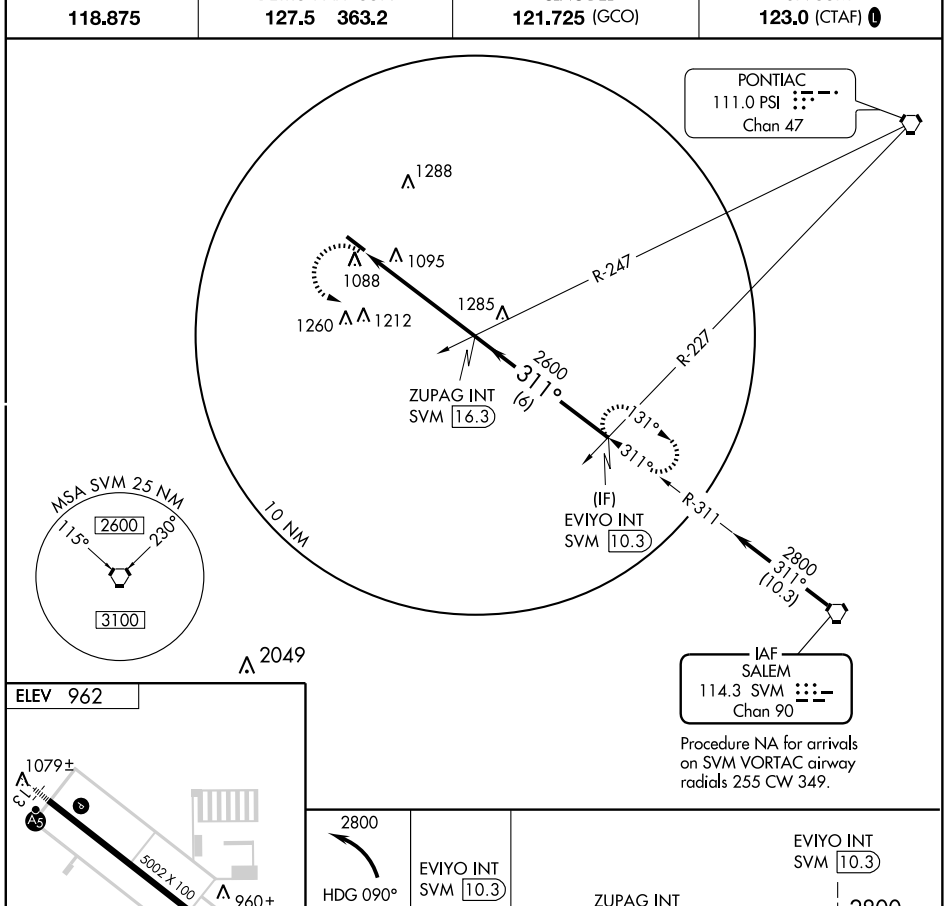
VOR RWY 31

HOWELL / LIVINGSTON COUNTY SPENCER J. HARDY (OZW)

If local altimeter setting not received, use Bishop Intl altimeter setting and increase allMDAs 80 feet. Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing left turn to 2800 via heading 090° and SVM R-311 to EVIYO Int/10.30 DME and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	127.5 363.2	121.725 (GCO)	123.0 (CTAF) L



Procedure NA for arrivals on SVM VORTAC airway radials 255 CW 349.

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

CATEGORY	A	B	C	D
S-31	1540-1 597 (600-1)	1540-1¼ 597 (600-1¼)	1540-1½ 597 (600-1½)	1540-1¾ 597 (600-1¾)
CIRCLING	1540-1 578 (600-1)	1540-1¼ 578 (600-1¼)	1540-1½ 578 (600-1½)	1540-2 578 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4300
276°	TDZE	812
	Apt Elev	813

RNAV (GPS) RWY 27
IONIA COUNTY (Y7Ø)

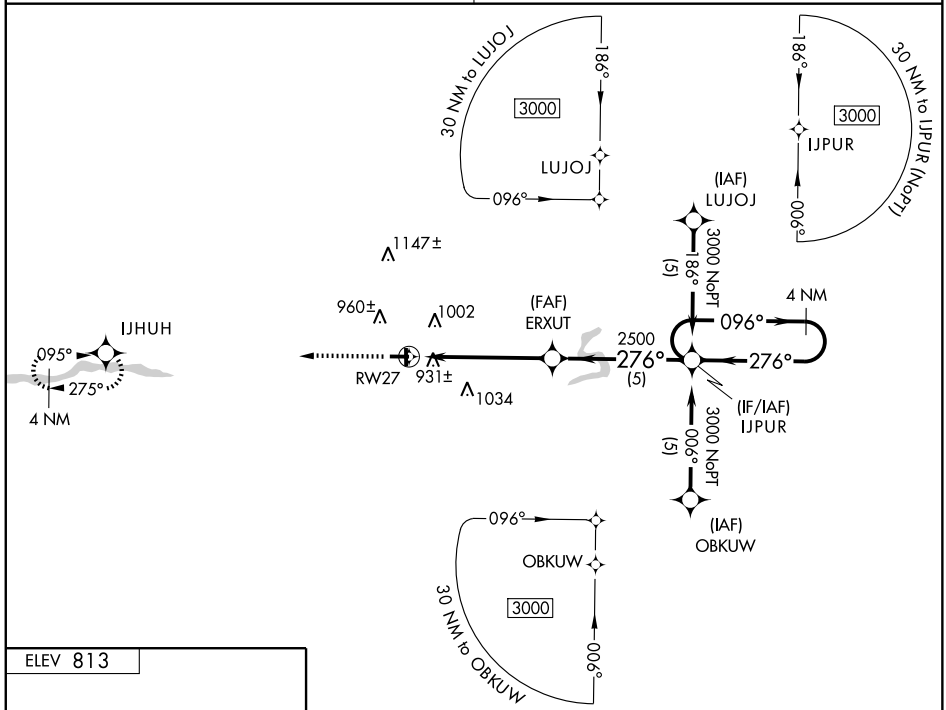
Use Lansing altimeter setting.
DME/DME RNP-0.3 NA.
GPS or RNP-0.3 required.

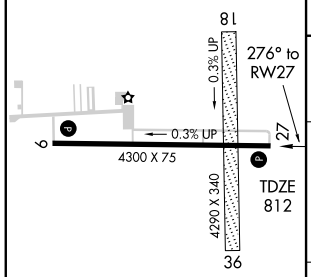
NA

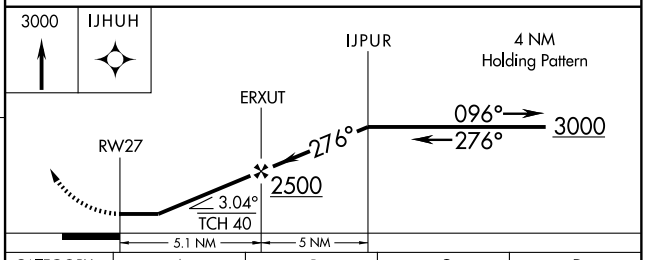
MISSED APPROACH: Climb to 3000 direct IJHUH WP and hold.

LANSING APP CON
118.65 226.4

UNICOM
122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1260 - 1	448 (500-1)	1260 - 1¼ 448 (500-1¼)	NA
CIRCLING	1380 - 1	567 (600-1)	1380 - 1½ 567 (600-1½)	NA

REIL Rwy 27 L
MIRL Rwy 9-27 L

VORTAC LAN	APP CRS	Rwy ldg	N/A
110.8	315°	TDZE	N/A
Chan 45		Apt Elev	818

VOR-A
IONIA COUNTY (Y7Ø)

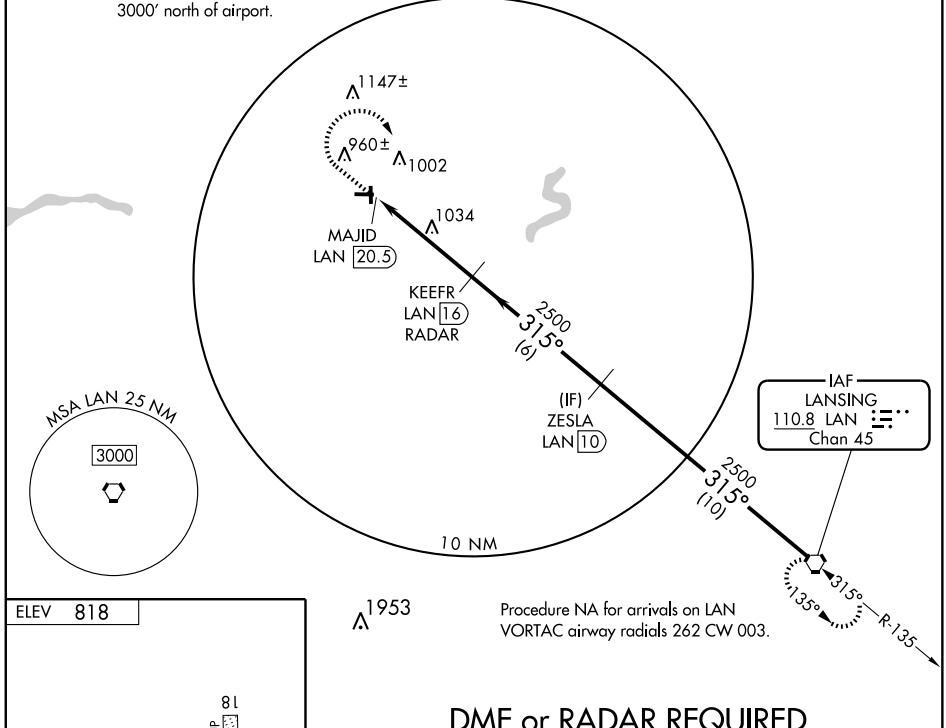
Use Lansing altimeter setting; when not received, use Charlotte altimeter setting and increase all MDAs 20 feet, and increase Cat C visibility ¼ mile.

NA

MISSED APPROACH: Climb to 2500 then right turn direct LAN VORTAC and hold.

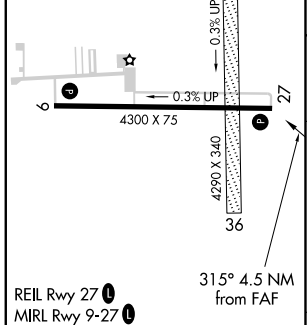
LANSING APP CON	UNICOM
118.65 226.4	122.8 (CTAF) L

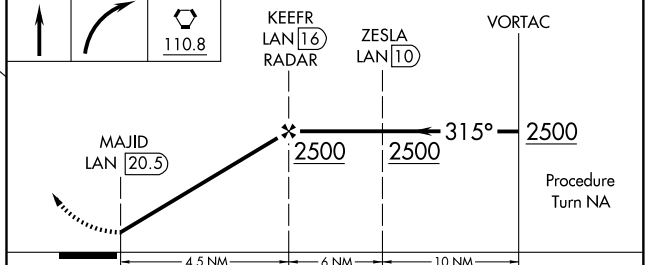
CAUTION: Brightly lighted shopping center 3000′ north of airport.



Procedure NA for arrivals on LAN VORTAC airway radials 262 CW 003.

DME or RADAR REQUIRED





FAF to MAP 4.5 NM					
Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

CATEGORY	A	B	C	D
CIRCLING	1400-1 582 (600-1)	1400-1¼ 582 (600-1¼)	1400-1½ 582 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-IMT	APP CRS	Rwy ldg	6501
111.5	010°	TDZE	1133
		Apt Elev	1182

ILS RWY 1

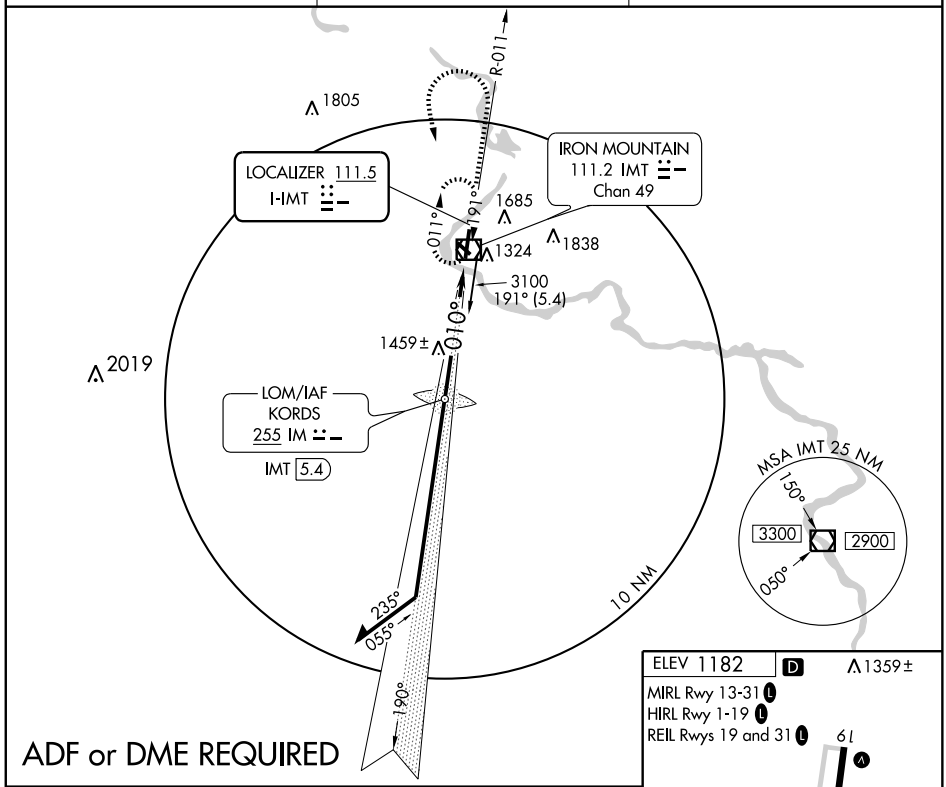
IRON MOUNTAIN/FORD (IMT)

Circling not authorized NE of Rwys 19 and 31.

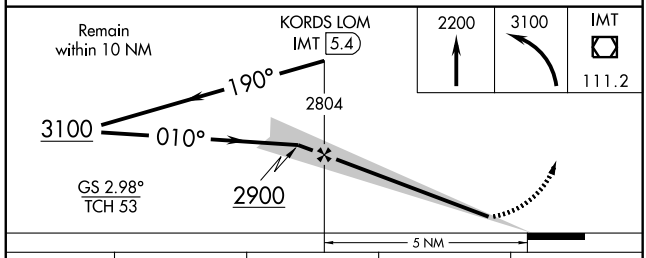
MALSR

MISSED APPROACH: Climb to 2200, then climbing left turn to 3100 direct IMT VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF)



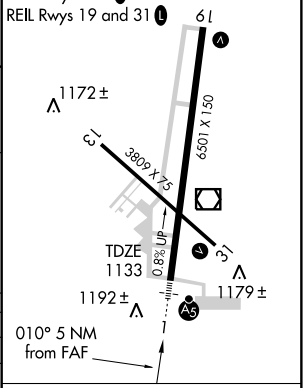
ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 1	1333-½ 200 (200-½)			
S-LOC 1	1720-½ 587 (600-½)		1720-1 587 (600-1)	1720-1¼ 587 (600-1¼)
CIRCLING	1720-1 538 (600-1)		1780-1½ 598 (600-1½)	1780-2 598 (600-2)

ELEV 1182 D 1359±

MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L



FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-IMT	APP CRS	Rwy ldg	6501
111.5	190°	TDZE	1182
		Apt Elev	1182

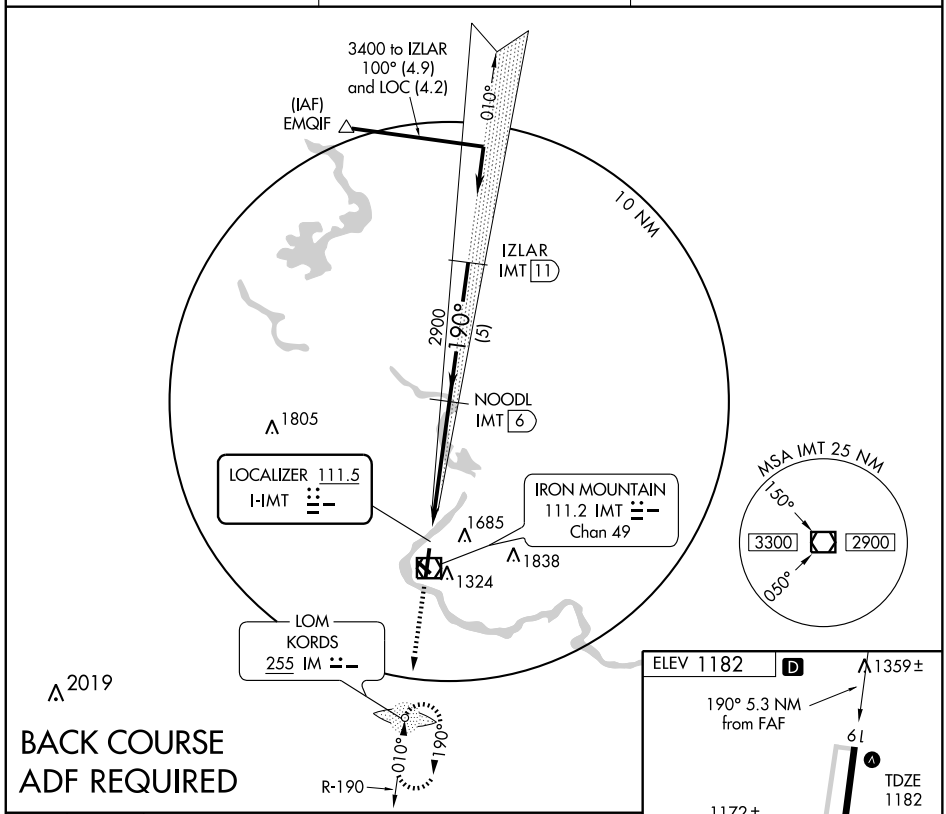
LOC/DME BC RWY 19

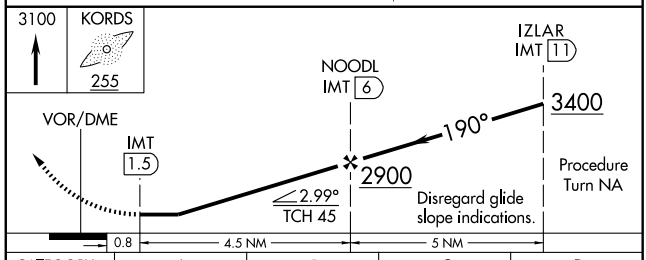
IRON MOUNTAIN/FORD (IMT)

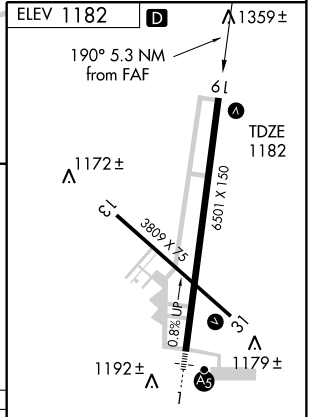
Circling not authorized NE of Rwys 19 and 31.
DME from IMT VOR/DME.
Simultaneous reception of I-IMT and IMT DME required.

MISSED APPROACH: Climb to 3100 direct KORDS LOM and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-19	1660-1 478 (500-1)		1660-1¼ 478 (500-1¼)	1660-1½ 478 (500-1½)
CIRCLING	1660-1 478 (500-1)	1720-1 538 (600-1)	1780-1½ 598 (600-1½)	1780-2 598 (600-2)

MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM IM	APP CRS	Rwy ldg	6501
255	010°	TDZE	1133
		Apt Elev	1182

NDB RWY 1

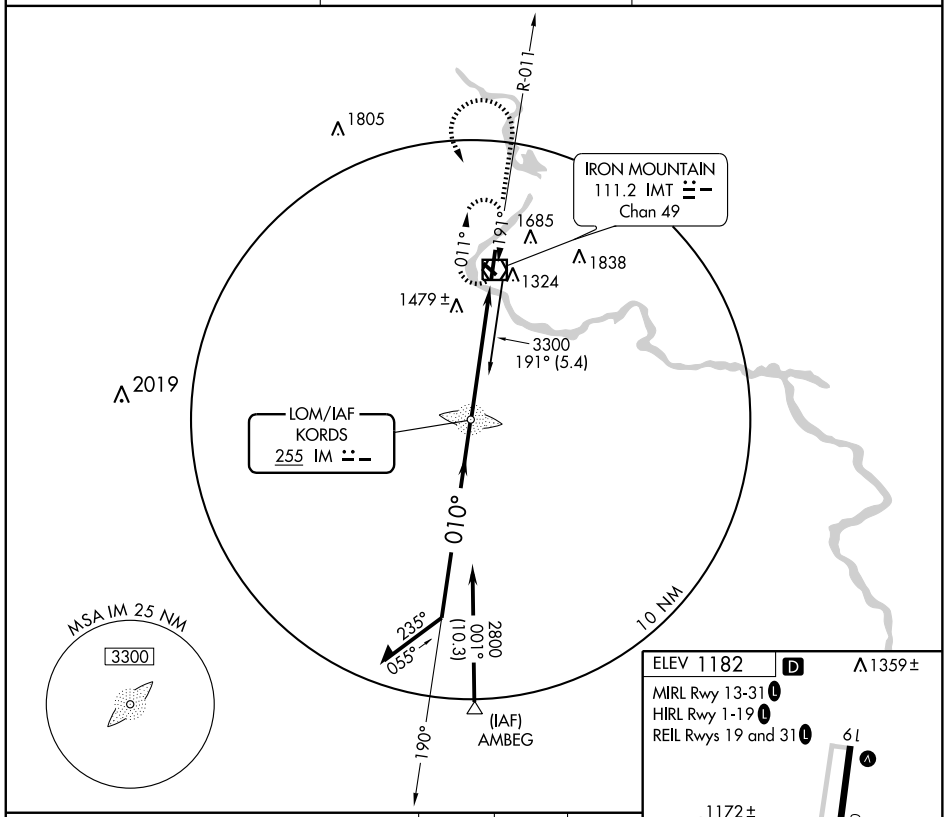
IRON MOUNTAIN/FORD (IMT)

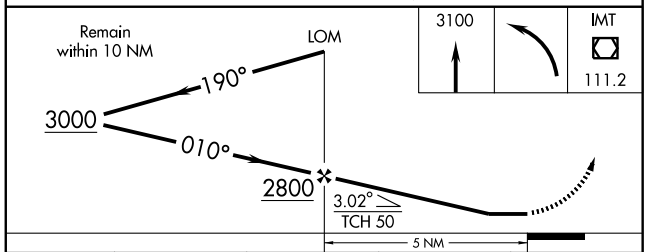
Circling not authorized NE of Rwys 19 and 31.
Circling not authorized at night to Rwy 31.

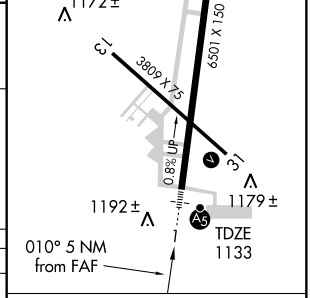
MALSR

MISSED APPROACH: Climb to 3100, then left turn direct IMT VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF)







CATEGORY	A	B	C	D
S-1	1780-¾ 647 (600-¾)		1780-1¼ 647 (600-1¼)	1780-1¾ 647 (600-1¾)
CIRCLING	1780-1 598 (600-1)		1780-1¾ 598 (600-1¾)	1780-2 598 (600-2)

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 77811 W01A	APP CRS 010°	Rwy ldg 6501 TDZE 1133 Apt Elev 1182

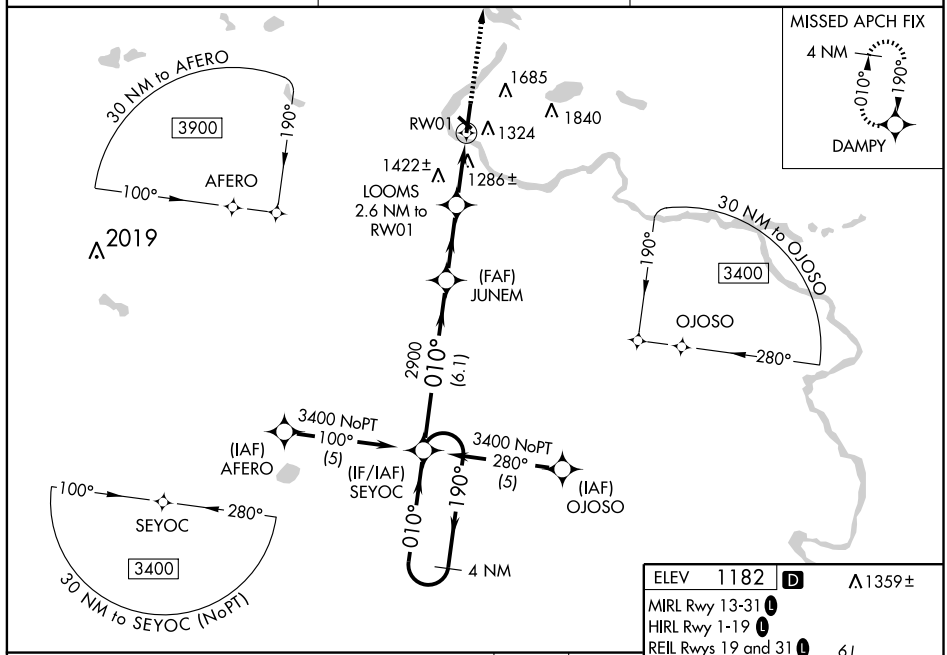
RNAV (GPS) RWY 1
IRON MOUNTAIN/FORD (IMT)

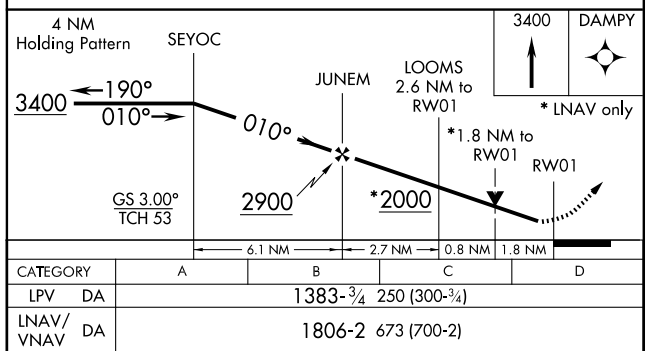
Inoperative table does not apply to LPV. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Circling NA NE of Rwys 19 and 31. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all DA/MDA 180 feet, increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ¾ mile, LNAV Cat C and D visibility ½ mile, and Circling Cat B visibility ¼ mile, Cat C and D visibility ½ mile. For inoperative MALSR increase visibility LNAV Cat A and B ¼ mile. For Inoperative MALSR when using Escanaba altimeter setting, increase LPV all Cats visibility to 1½ mile, LNAV Cat A visibility to 1 mile. Baro-VNAV and VDP NA when using Escanaba altimeter setting.

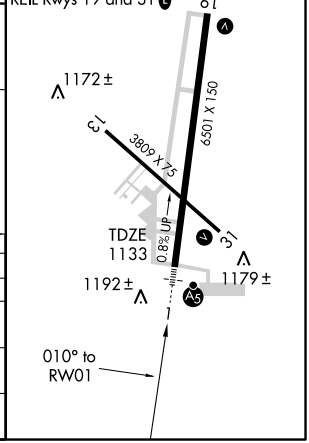
MALSR A5

MISSED APPROACH: Climb to 3400 direct DAMPY and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1383-¾ 250 (300-¾)			
LNAV/VNAV DA	1806-2 673 (700-2)			
LNAV MDA	1760-¾ 627 (600-¾)		1760-1¼ 627 (600-1¼)	1760-1½ 627 (600-1½)
CIRCLING	1760-1 578 (600-1)		1780-1¾ 598 (600-1¾)	1780-2 598 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

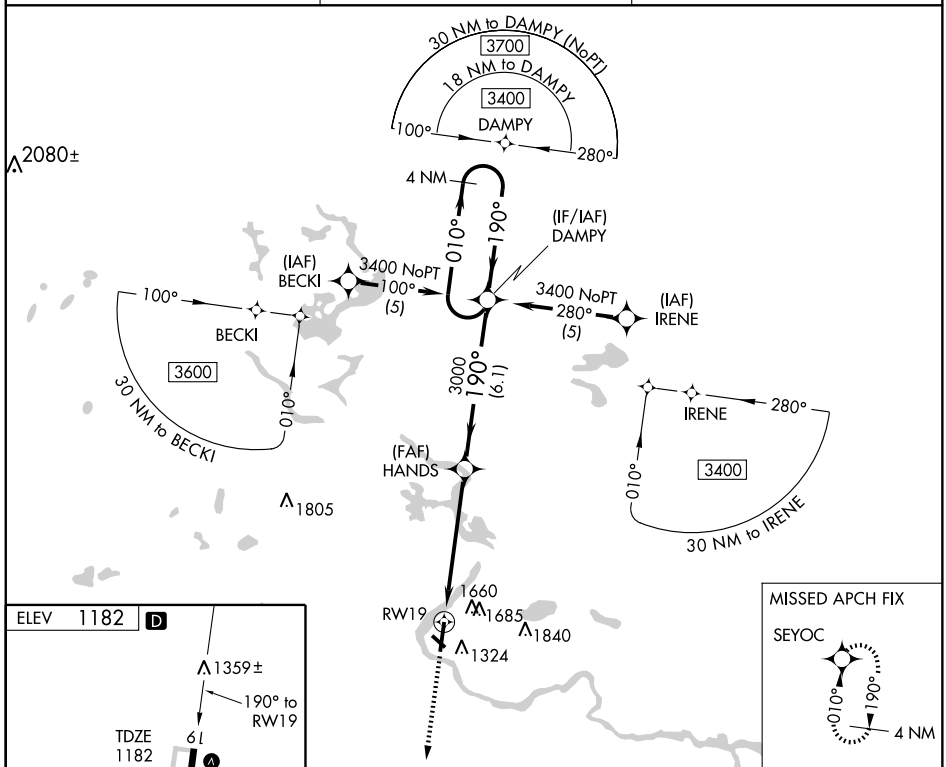
APP CRS	Rwy ldg	6501
190°	TDZE	1182
	Apt Elev	1182

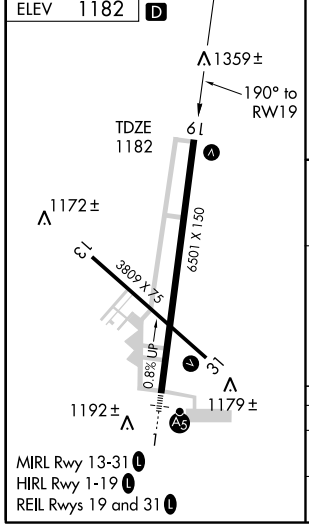
RNAV (GPS) RWY 19
IRON MOUNTAIN/FORD (IMT)

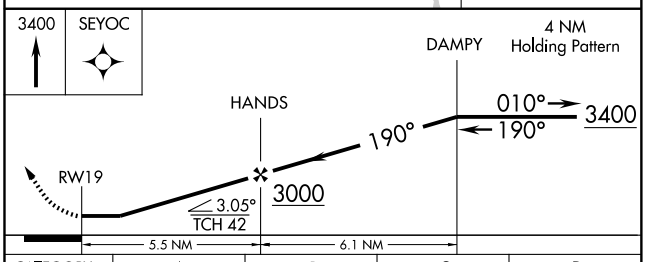
Circling NA northeast of Rwys 19 and 31. DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.
When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, increase LNAV and Circling Cat B visibility ¼ mile, Cats C and D visibility ¾ mile.

MISSED APPROACH: Climb to 3400 direct SEYOC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1760-1 578 (600-1)		1760-1½ 578 (600-1½)	1760-1¾ 578 (600-1¾)
CIRCLING	1760-1 578 (600-1)		1780-1½ 598 (600-1½)	1780-2 598 (600-2)

MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME IMT	APP CRS	Rwy ldg	3809
111.2	323°	TDZE	1131
Chan 49		Apt Elev	1182

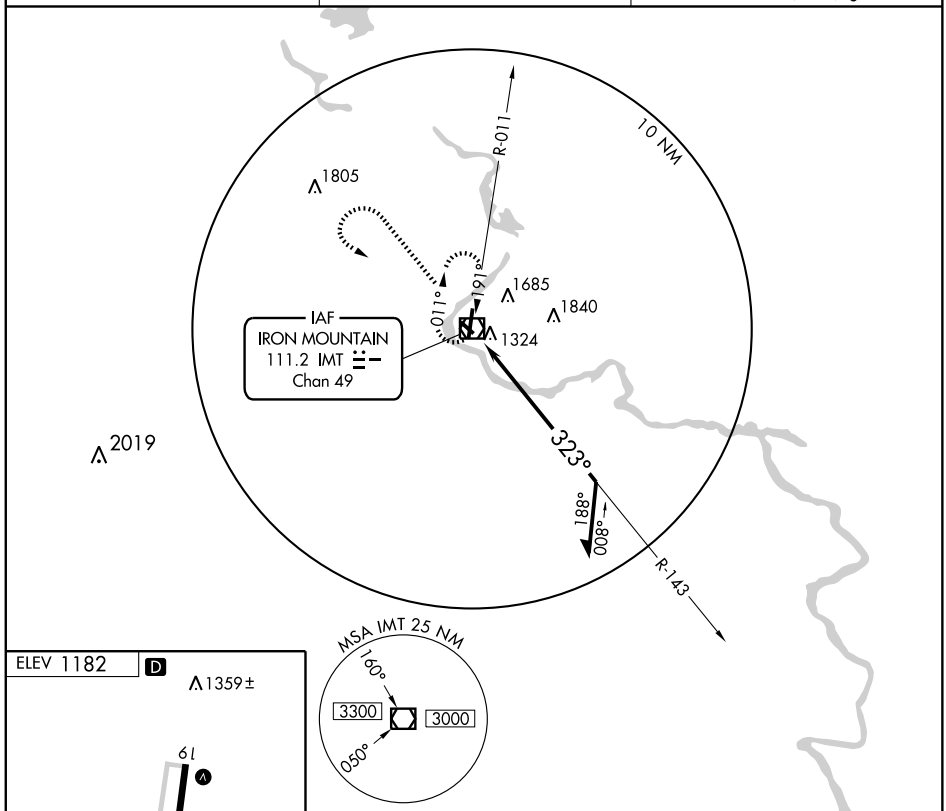
VOR RWY 31

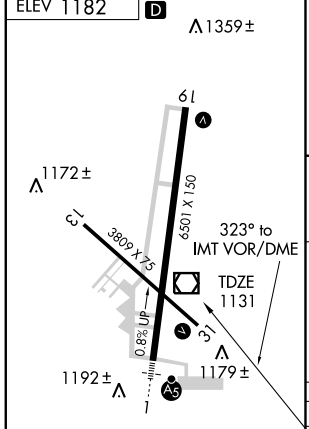
IRON MOUNTAIN/FORD (IMT)

Circling NA NE of Rwys 19 and 31. Procedure NA at night. Visibility reduction by helicopters NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, and increase S-31 and Circling Cat B visibility ¼ mile and Cats C and D visibility ½ mile.

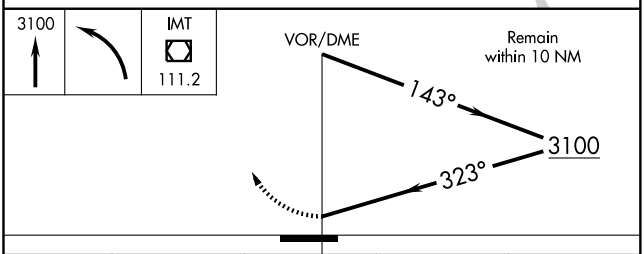
MISSED APPROACH: Climb to 3100 then left turn direct IMT VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L





MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L



CATEGORY	A	B	C	D
S-31	1760-1 629 (600-1)		1760-1¾ 629 (600-1¾)	1760-2 629 (600-2)
CIRCLING	1760-1 578 (600-1)		1780-1¾ 598 (600-1¾)	1780-2 598 (600-2)

LOC I-IWD	APP CRS	Rwy ldg	6501
111.5	270°	TDZE	1230
		Apt Elev	1230

ILS RWY 27

IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

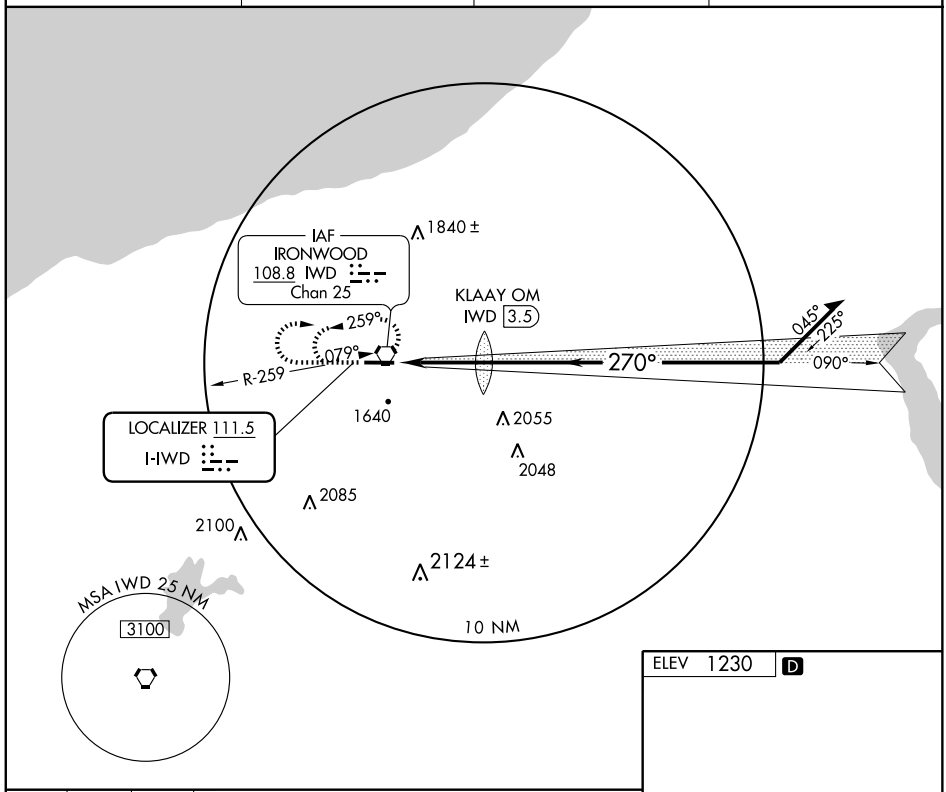
Use Ironwood altimeter setting; if not received, procedure not authorized.

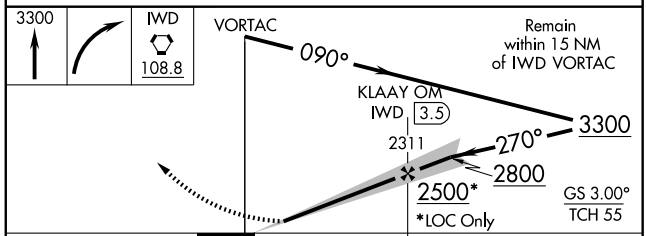
NA

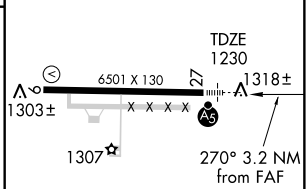
MALSR

MISSED APPROACH: Climb to 3300, then right turn direct IWD VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	GREEN BAY RADIO	UNICOM
125.175	133.55	122.3	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-ILS 27	1430-½ 200 (200-½)			
S-LOC-27	1720-½ 490 (500-½)		1720-¾ 490 (500-¾)	1720-1 490 (500-1)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

FAF to MAP 3.2 NM					
Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04

EC-1, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6501
090°	TDZE	1230
	Apt Elev	1230

RNAV (GPS) RWY 9

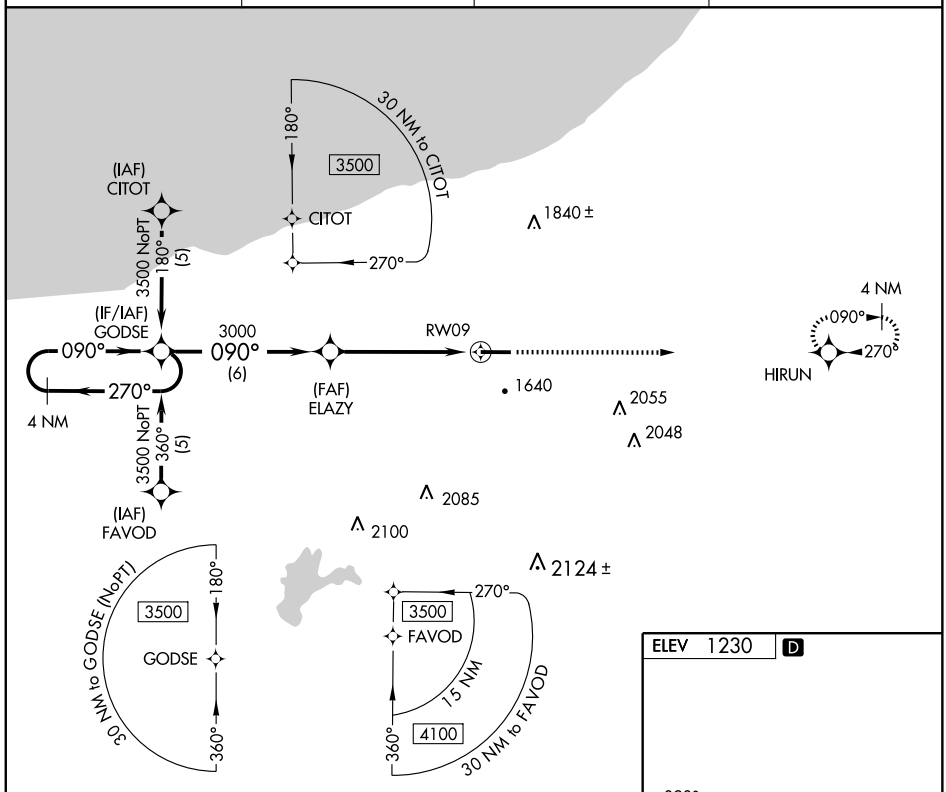
IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

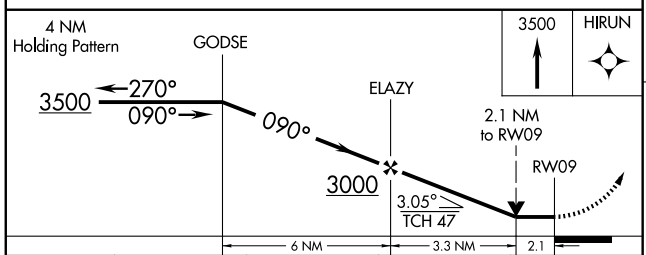
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

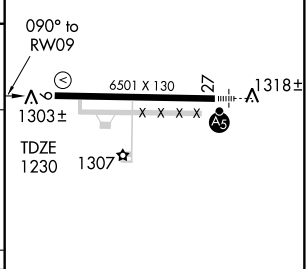
When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase LNAV Cat B visibility ¼ mile, Cat C/D ½ mile and increase Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

MISSED APPROACH: Climb to 3500 direct HIRUN and hold.

AWOS-3	MINNEAPOLIS CENTER	GREEN BAY RADIO	UNICOM
125.175	133.55	122.3	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1940-1 710 (800-1)		1940-2 710 (800-2)	1940-2¼ 710 (800-2¼)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 50212 W27A	APP CRS 270°	Rwy ldg 6501 TDZE 1230 Apt Elev 1230

RNAV (GPS) RWY 27

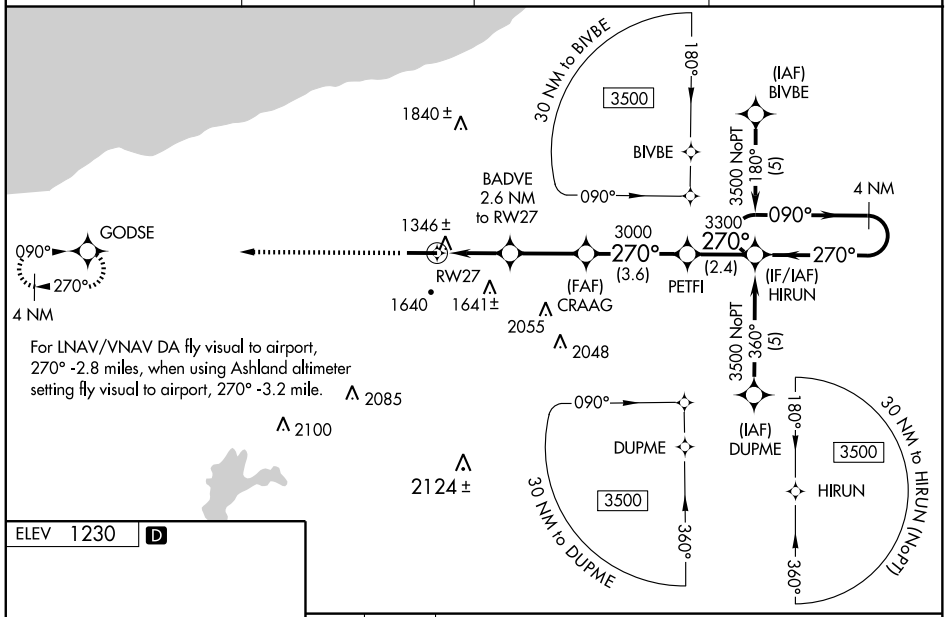
IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

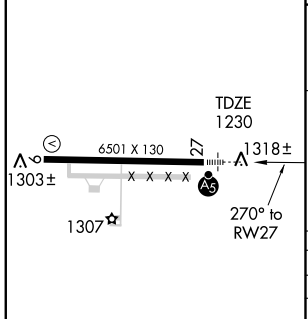
Inoperative table does not apply to LPV and LNAV/VNAV all Cats and LNAV Cats A and B. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When using Ashland altimeter setting: inoperative table does not apply to LNAV/VNAV all Cats and LNAV Cat A. When using Ashland altimeter setting: for inoperative MALSR, increase LNAV Cat B visibility to 1¼ mile. Baro-VNAV and VDP NA when using Ashland altimeter setting. When local altimeter setting not received, use Ashland altimeter setting and increase all DA 132 feet and all MDA 140 feet, increase LNAV/VNAV Cat C visibility ¼ mile, LNAV Cat C/D visibility ½ mile, and Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

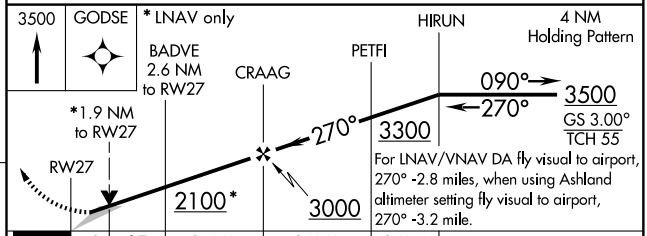
MALSR

MISSED APPROACH: Climb to 3500 direct GODSE and hold.

AWOS-3	MINNEAPOLIS CENTER	GREEN BAY RADIO	UNICOM
125.175	133.55	122.3	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1430-1 200 (200-1)			
LNAV/VNAV DA	2166-2 936 (1000-2)		2166-2¾ 936 (1000-2¾)	2166-3 936 (1000-3)
LNAV MDA	1900-1 670 (700-1)		1900-1¼ 670 (700-1¼)	1900-1½ 670 (700-1½)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

EC-1, 14 JAN 2010 to 11 FEB 2010

VORTAC IWD	APP CRS	Rwy ldg 6501
108.8	079°	TDZE 1230
Chan 25		Apt Elev 1230

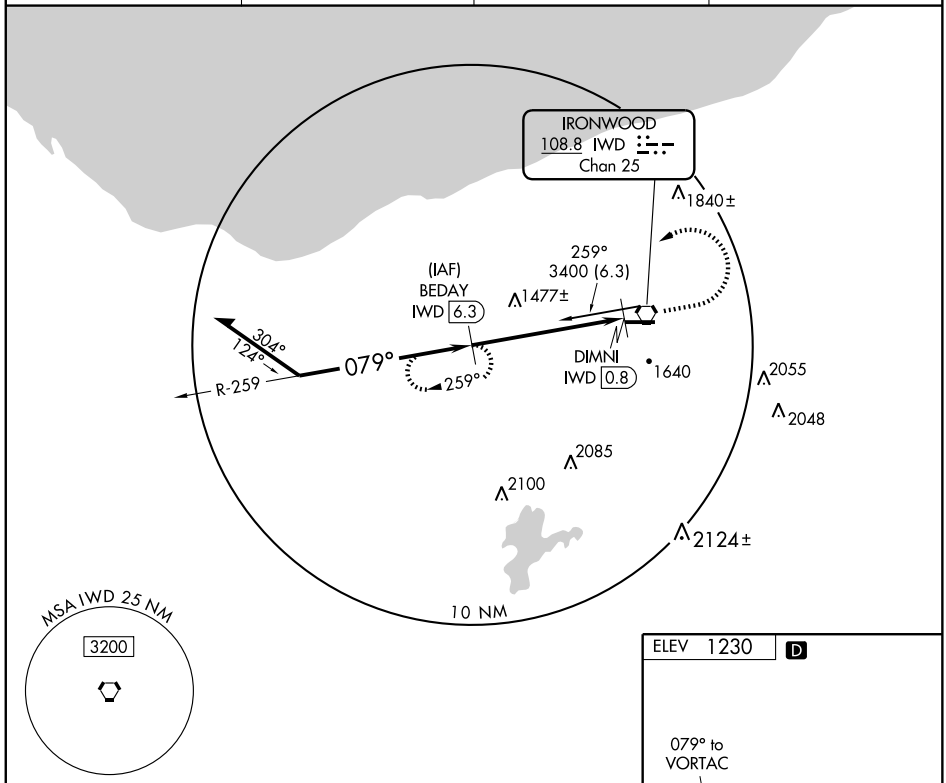
VOR/DME RWY 9

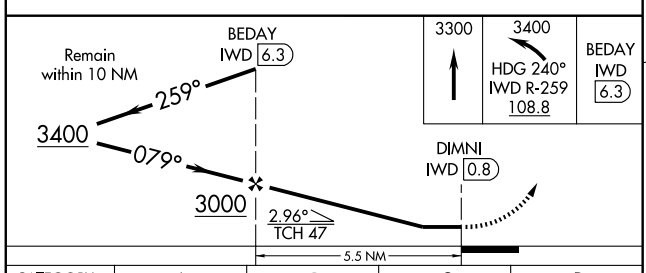
IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

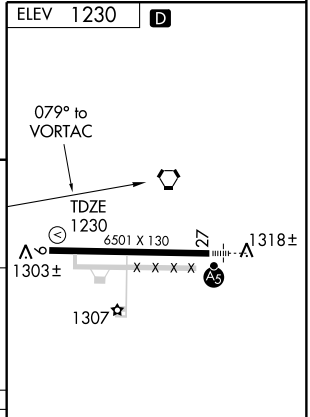
T A Visibility reduction by helicopters NA. When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase S-9 visibility Cat C ¼ mile, and Cat D ½ mile. Increase Circling visibility Cat A/B ¼ mile and Cat C ½ mile.

MISSED APPROACH: Climb to 3300 then climbing left turn to 3400 via heading 240° and IWD R-259 to BEDAY/6.3 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	GREEN BAY RADIO	UNICOM
125.175	133.55	122.3	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-9	1740-1	510 (600-1)	1740-1½	510 (600-1½)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC IWD	APP CRS	Rwy ldg 6501
108.8	283°	TDZE 1230
Chan 25		Apt Elev 1230

VOR/DME RWY 27

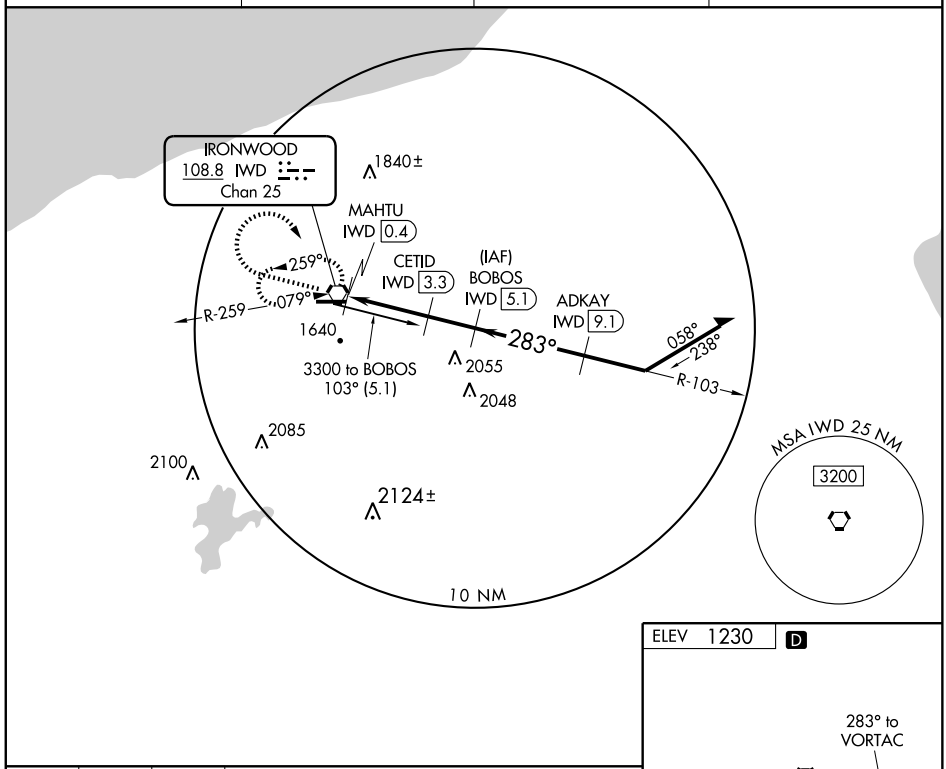
IRONWOOD/GOGEBIC-IRON COUNTY (IWD)

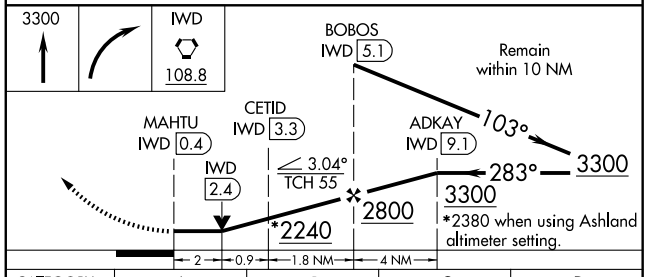
For inoperative MALSR when using Ashland altimeter setting, increase S-27 Cat A visibility to 1 mile. When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase S-27 Cat A/B visibility ¼ mile, Cat C/D ½ mile, increase Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

MALSR

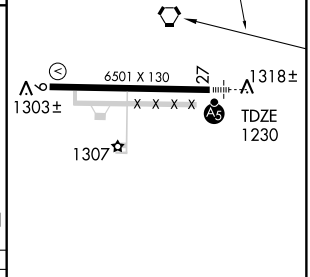
MISSED APPROACH: Climb to 3300 then right turn direct IWD VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	GREEN BAY RADIO	UNICOM
125.175	133.55	122.3	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-27	1940-½ 710 (800-½)		1940-1½ 710 (800-1½)	1940-1¾ 710 (800-1¾)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)



REIL Rwy 9 L
HIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

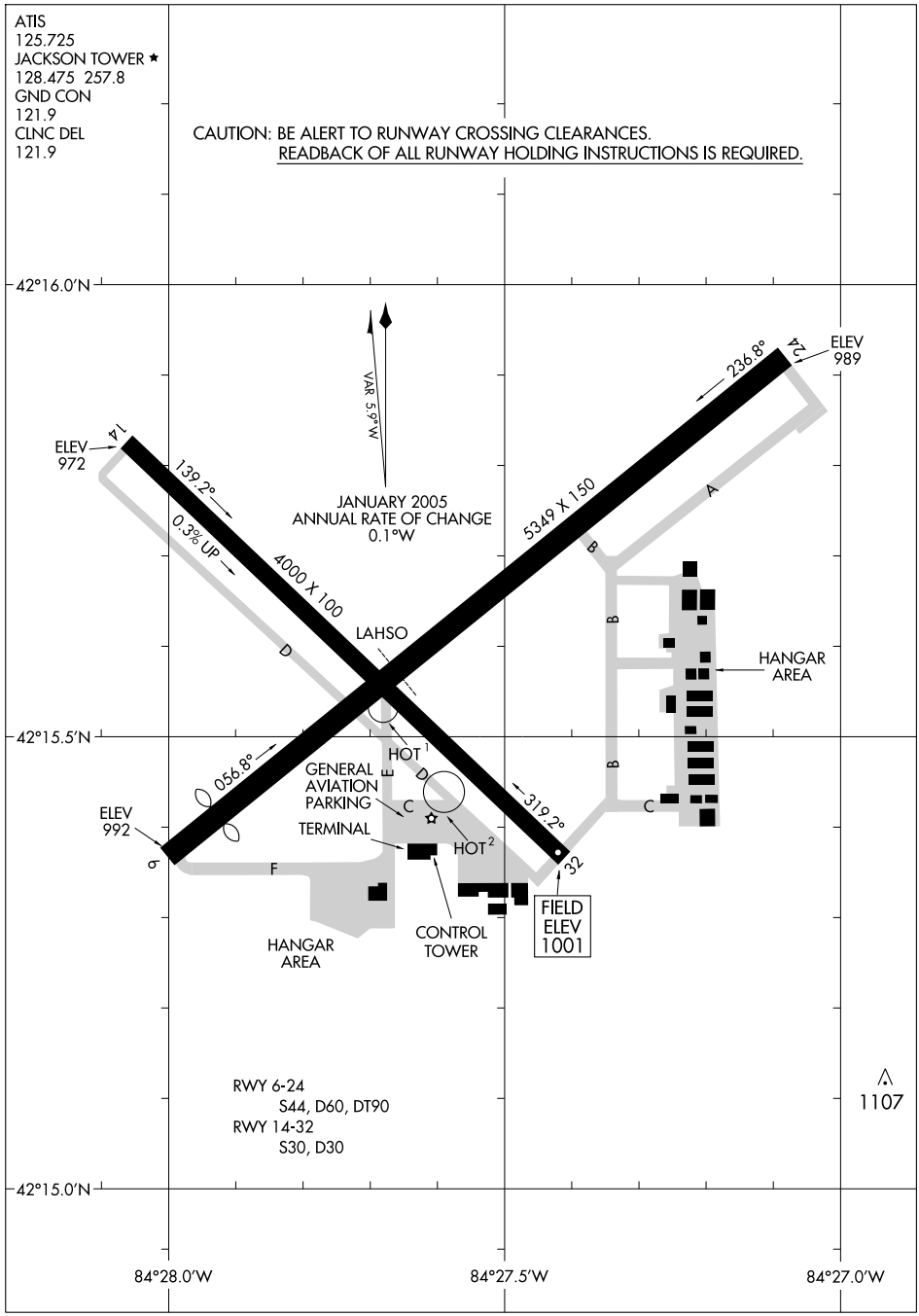
AIRPORT DIAGRAM

AL-861 (FAA)

JACKSON COUNTY-REYNOLDS FIELD (JXN)
JACKSON, MICHIGAN

ATIS
125.725
JACKSON TOWER ★
128.475 257.8
GND CON
121.9
CLNC DEL
121.9

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.



LOC I-JXN 109.1	APP CRS 236°	Rwy ldg 5349 TDZE 999 Apt Elev 1001

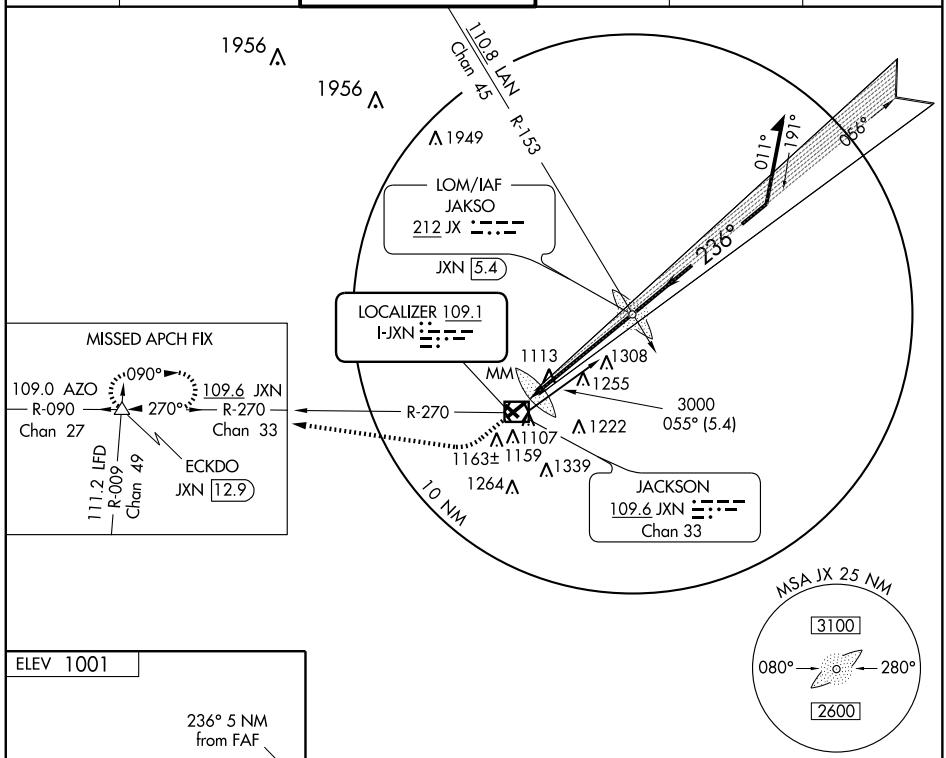
ILS RWY 24

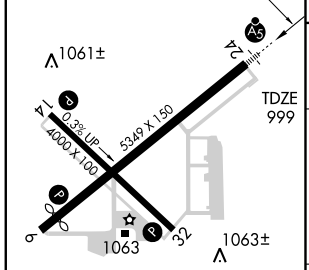
JACKSON COUNTY-REYNOLDS FIELD (JXN)

MALSR

MISSED APPROACH: Climb to 1400, then climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

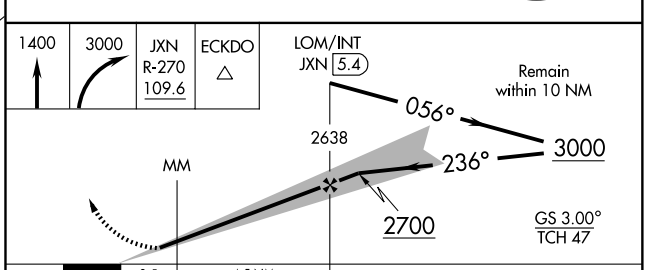
ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95





HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40



CATEGORY	A	B	C	D
S-ILS 24	1199-½ 200 (200-½)			
S-LOC 24	1440-½ 441 (500-½)		1440-¾ 441 (500-¾)	1440-1 441 (500-1)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM JX	APP CRS	Rwy ldg	5349
212	236°	TDZE	999
		Apt Elev	1001

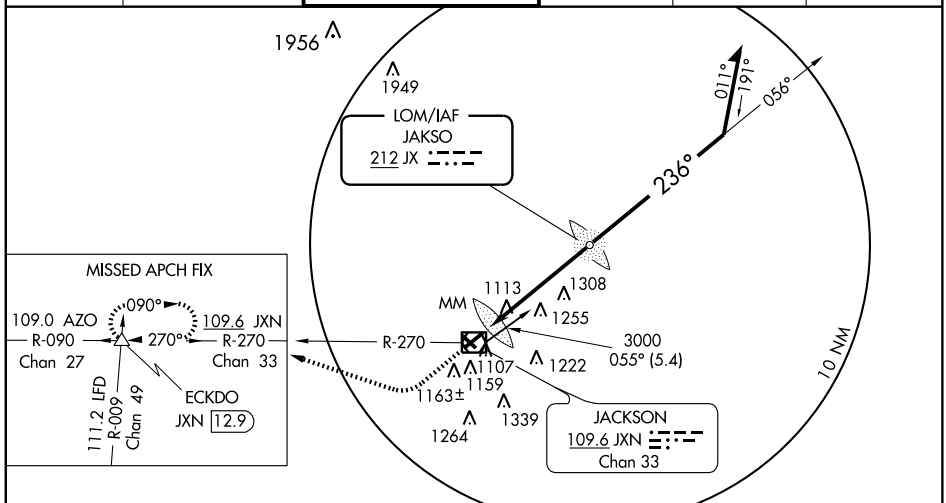
NDB RWY 24

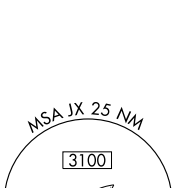
JACKSON COUNTY-REYNOLDS FIELD (JXN)

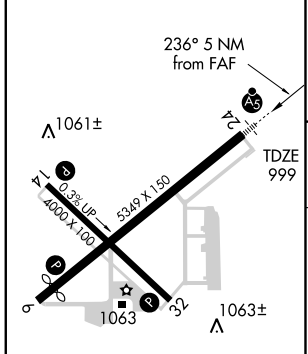
MALSR

MISSED APPROACH: Climbing right to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95

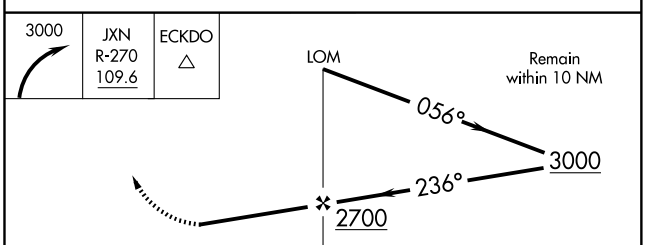






HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40



CATEGORY	A	B	C	D
S-24	1660-¾ 661 (700-¾)		1660-1¼ 661 (700-1¼)	1660-1¾ 661 (700-1¾)
CIRCLING	1660-1 659 (700-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

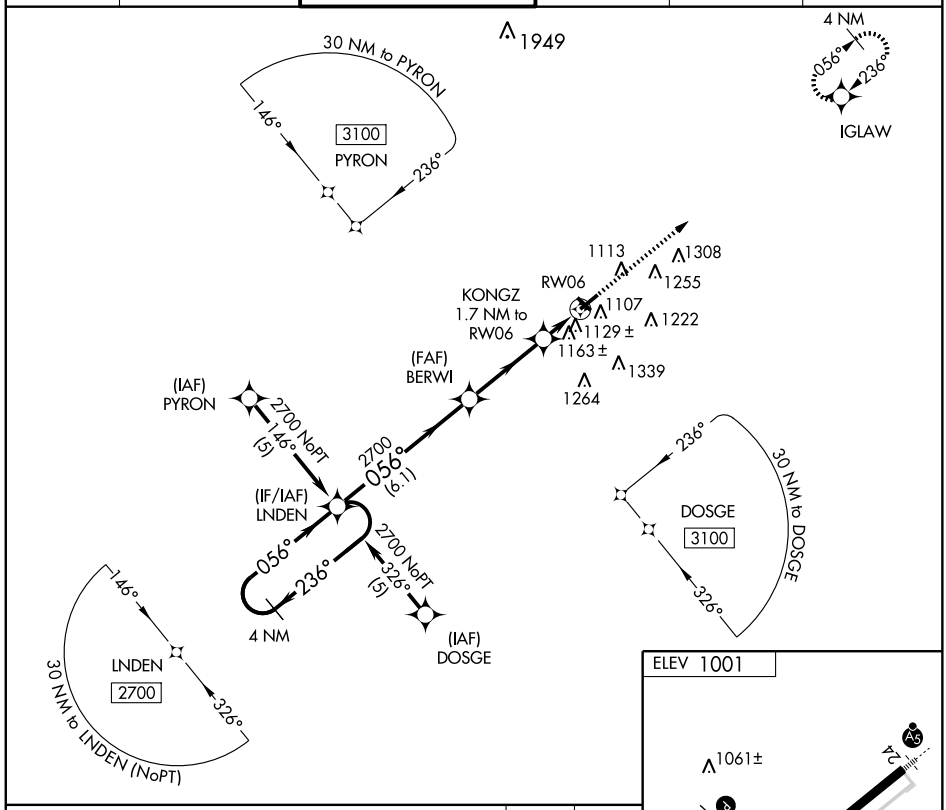
APP CRS	Rwy ldg	4909
056°	TDZE	999
	Apt Elev	1001

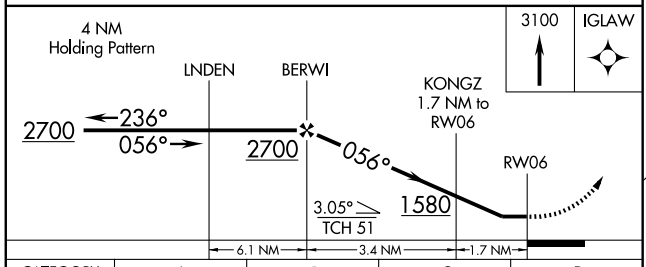
RNAV (GPS) RWY 6
JACKSON COUNTY-REYNOLDS FIELD (JXN)

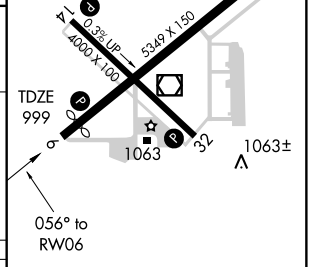
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3100 direct IGLAW and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95







CATEGORY	A	B	C	D
LNAV MDA	1380-1 381 (400-1)			1380-1¼ 381 (400-1¼)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
138°	TDZE	996
	Apt Elev	1001

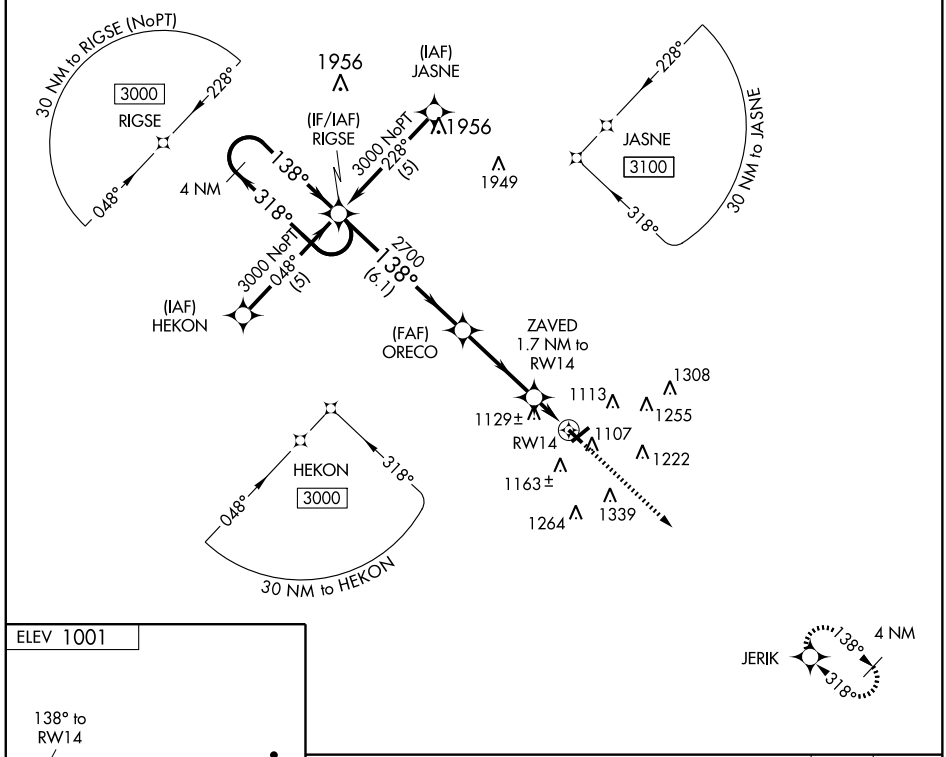
RNAV (GPS) RWY 14

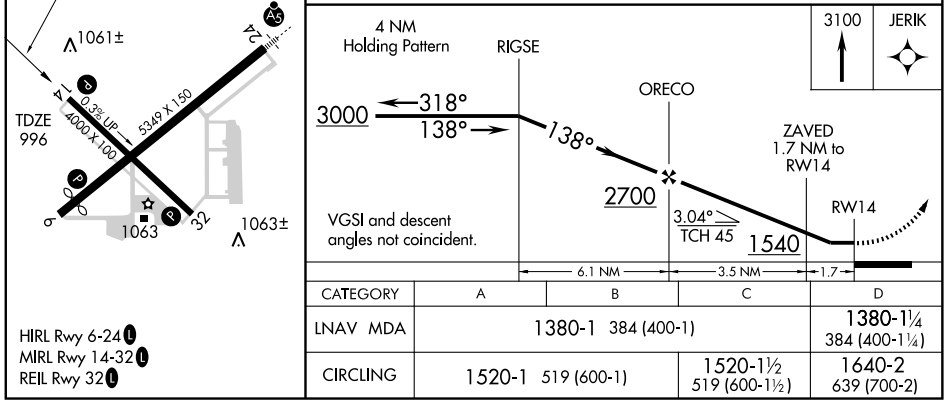
JACKSON COUNTY-REYNOLDS FIELD (JXN)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3100 direct JERIK and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95





CATEGORY	A	B	C	D
LNAV MDA	1380-1 384 (400-1)			1380-1¼ 384 (400-1¼)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 82212 W24A	APP CRS 236°	Rwy ldg 5349 TDZE 999 Apt Elev 1001

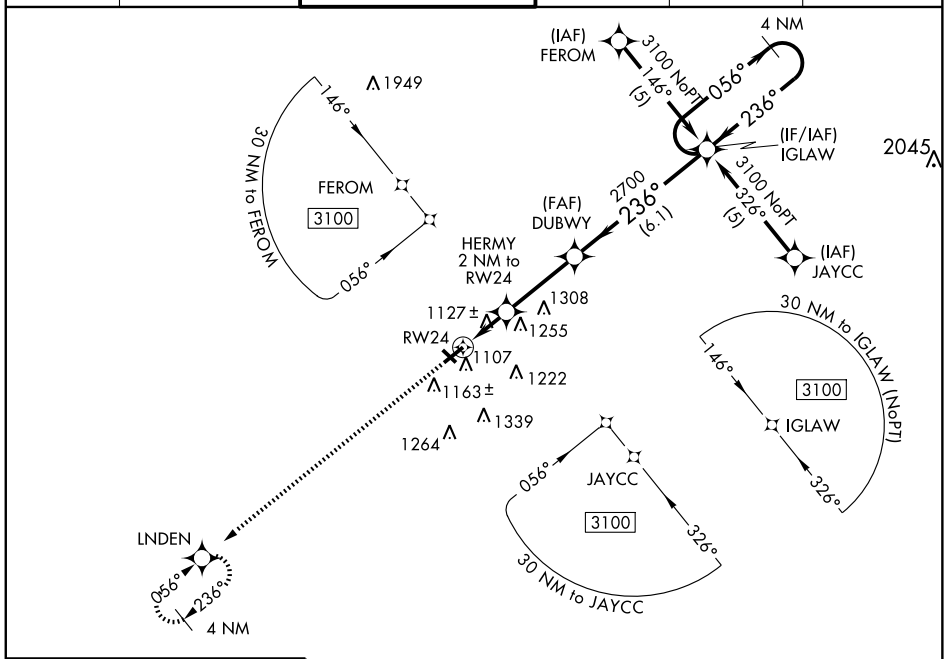
RNAV (GPS) RWY 24
JACKSON COUNTY-REYNOLDS FIELD (JXN)

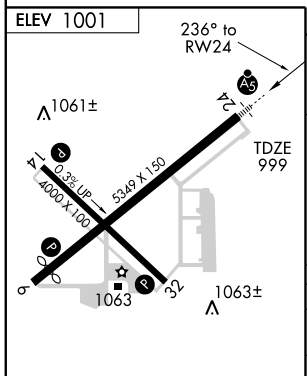
Baro-VNAV NA when using Mason altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F) DME/DME RNP-0.3 NA. When local altimeter setting not received, use Mason altimeter setting and increase all DA 54 feet, all MDA 60 feet. Increase LNAV/VNAV all Cats, LNAV and circling Cat C/D visibility ¼ mile.

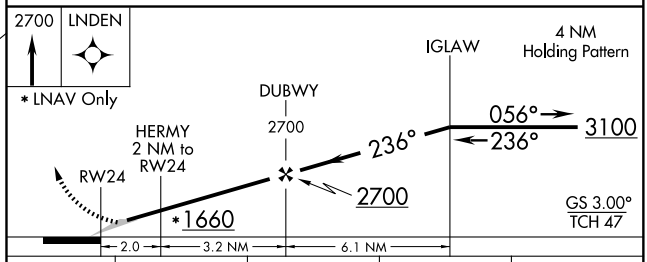
MALSR

MISSED APPROACH: Climb to 2700 direct LNDEN and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95







CATEGORY	A	B	C	D
LPV DA	1199-½ 200 (200-½)			
LNAV/VNAV DA	1409-1 410 (500-1)			
LNAV MDA	1560-½ 561 (600-½)		1560-1 561 (600-1)	1560-1¼ 561 (600-1¼)
CIRCLING	1560-1 559 (600-1)		1560-1½ 559 (600-1½)	1640-2 639 (700-2)

HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

APP CRS	Rwy ldg	4000
318°	TDZE	1001
	Apt Elev	1001

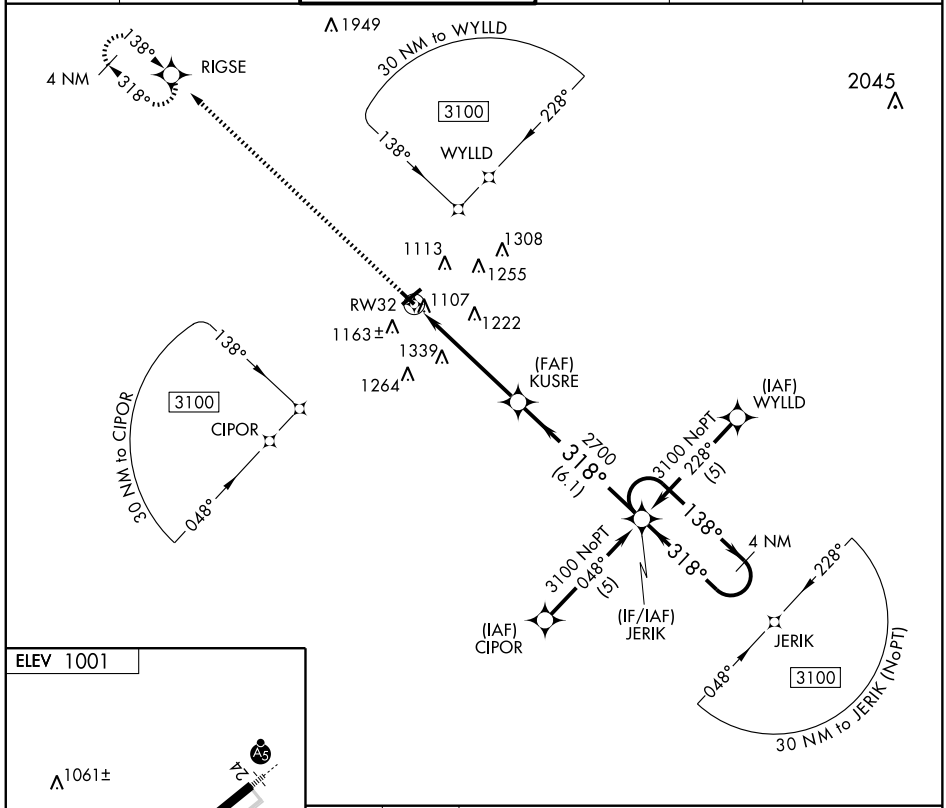
RNAV (GPS) RWY 32

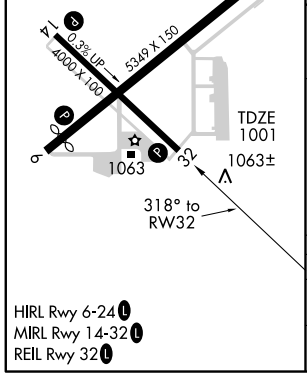
JACKSON COUNTY-REYNOLDS FIELD (JXN)

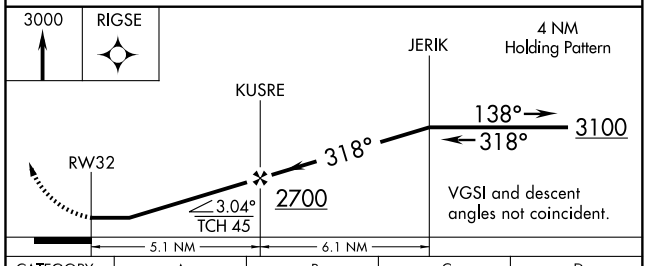
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3000 direct RIGSE and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95







CATEGORY	A	B	C	D
LNAV MDA	1560-1 559 (600-1)		1560-1½ 559 (600-1½)	1560-1¾ 559 (600-1¾)
CIRCLING	1560-1 559 (600-1)		1560-1½ 559 (600-1½)	1640-2 639 (700-2)

HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME RWY 24
JACKSON COUNTY-REYNOLDS FIELD (JXN)

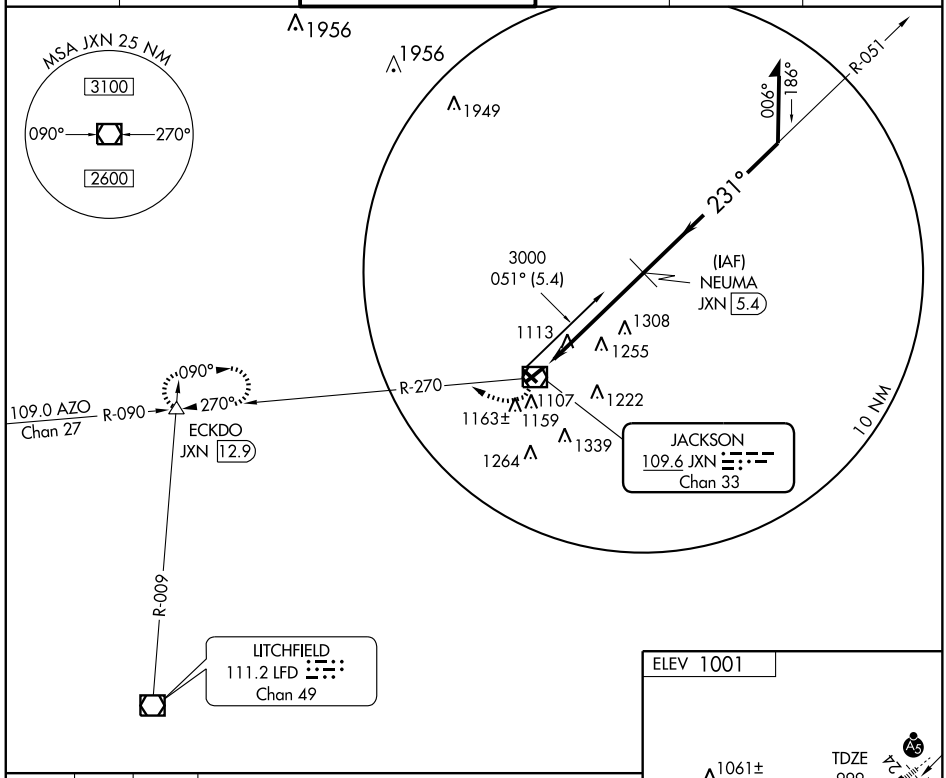
VOR/DME JXN	APP CRS	Rwy ldg	5349
109.6	231°	TDZE	999
Chan 33		Apt Elev	1001

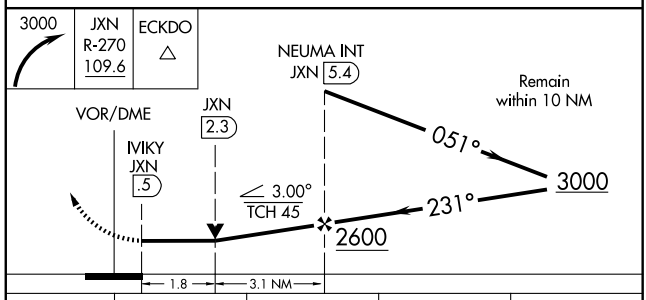
When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile. VDP NA when using Mason altimeter setting.

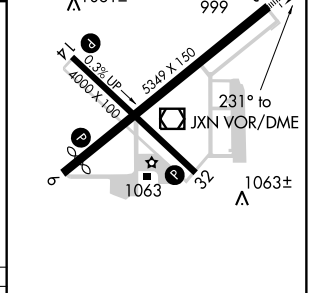
MALSR

MISSED APPROACH: Climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95







CATEGORY	A	B	C	D
S-24	1620-½ 621 (700-½)		1620-1¼ 621 (700-1¼)	1620-1½ 621 (700-1½)
CIRCLING	1620-1 619 (700-1)		1620-1¾ 619 (700-1¾)	1640-2 639 (700-2)

HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

VOR/DME JXN 109.6 Chan 33	APP CRS 062°	Rwy ldg 4909 TDZE 999 Apt Elev 1001

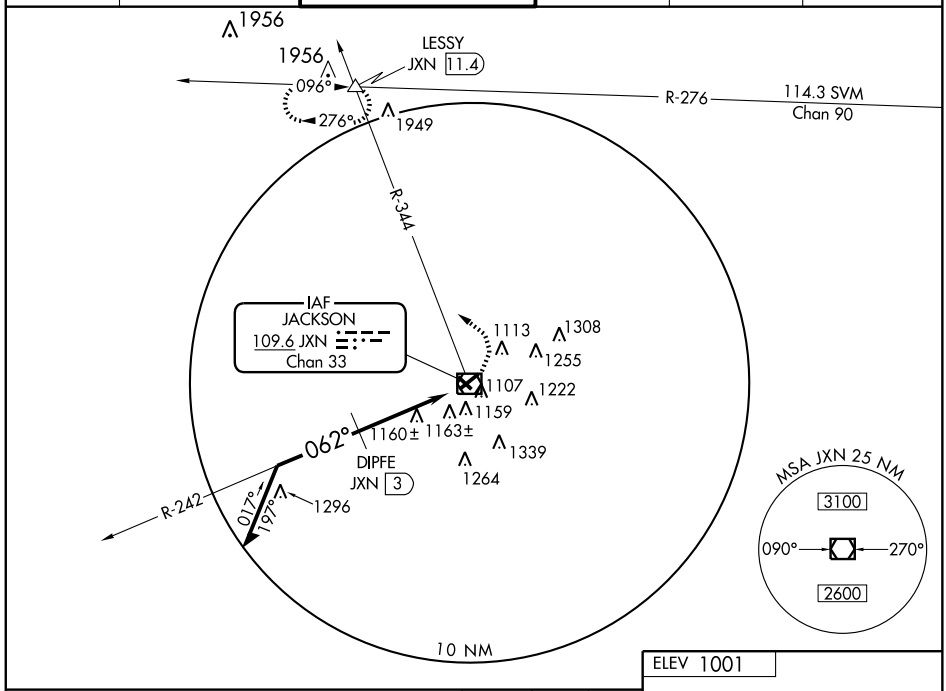
VOR RWY 6

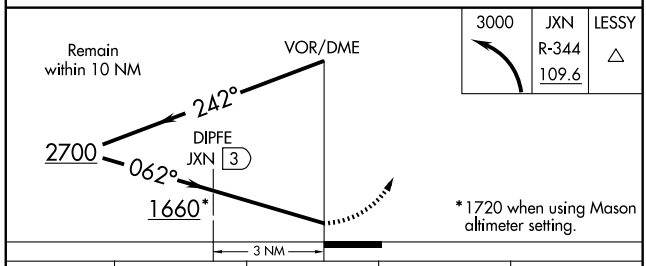
JACKSON COUNTY-REYNOLDS FIELD (JXN)

Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet. Increase all Cat C/D visibilities ¼ mile.

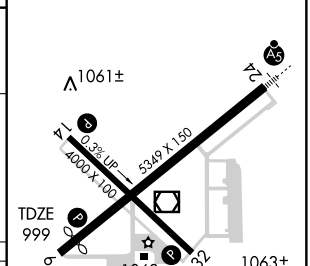
MISSED APPROACH: Climbing left turn to 3000 via JXN R-344 to LESSY Int/JXN 11.4 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95





*1720 when using Mason altimeter setting.



CATEGORY	A	B	C	D
S-6	1660-1 661 (700-1)		1660-1¾ 661 (700-1¾)	1660-2 661 (700-2)
CIRCLING	1660-1 659 (700-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)
DIPFE MINIMUMS				
S-6	1460-1 461 (500-1)		1460-1¼ 461 (500-1¼)	1460-1½ 461 (500-1½)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

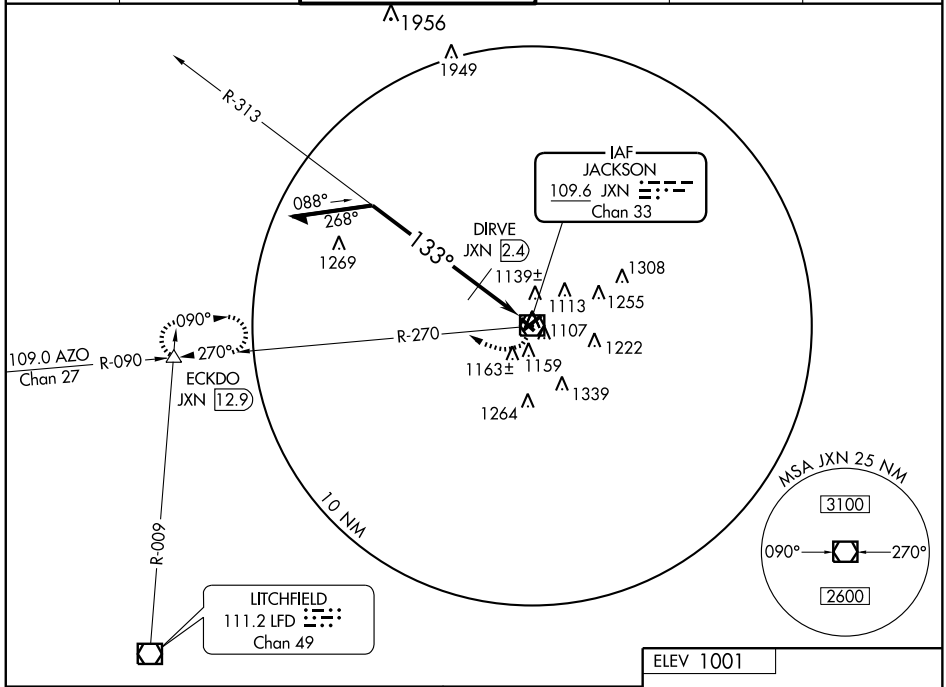
VOR RWY 14
JACKSON COUNTY-REYNOLDS FIELD (JXN)

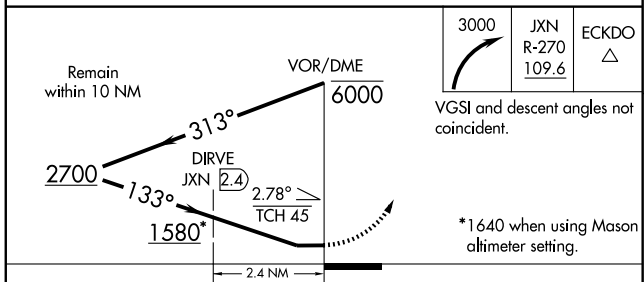
VOR/DME JXN	APP CRS	Rwy ldg	4000
109.6	133°	TDZE	996
Chan 33		Apt Elev	1001

Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climbing right turn to 3000 via JXN R-270 to ECKDO Int/JXN 12.9 DME and hold.

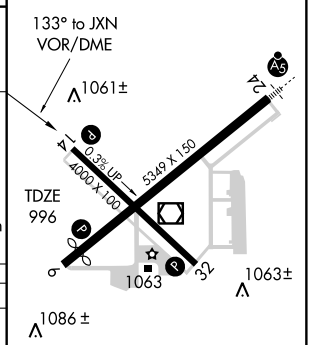
ATIS	LANSING APP CON	JACKSON TOWER*	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95





VGSI and descent angles not coincident.

*1640 when using Mason altimeter setting.



HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

CATEGORY	A	B	C	D
S-14	1580-1 584 (600-1)		1580-1½ 584 (600-1½)	1580-1¾ 584 (600-1¾)
CIRCLING	1580-1 579 (600-1)		1580-1½ 579 (600-1½)	1640-2 639 (700-2)
DIRVE MINIMUMS				
S-14	1400-1 404 (400-1)		1400-1¼ 404 (400-1¼)	
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME JXN	APP CRS	Rwy ldg	4000
109.6	325°	TDZE	1001
Chan 33		Apt Elev	1001

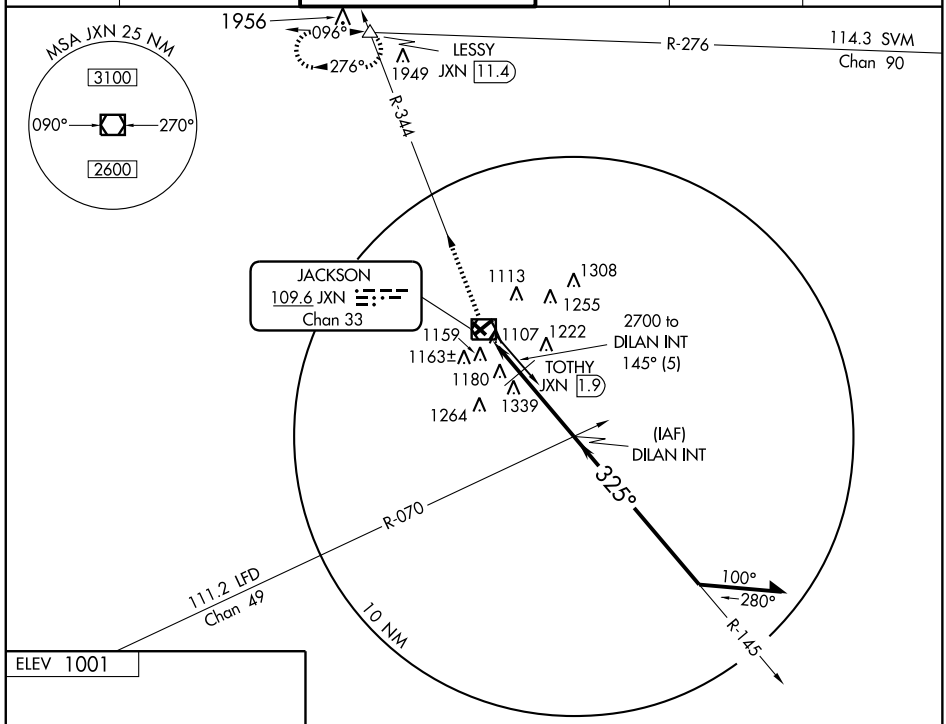
VOR RWY 32

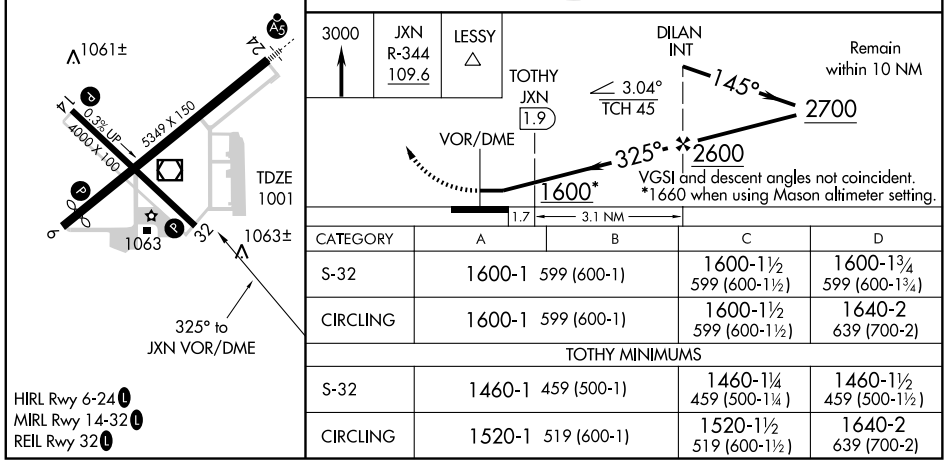
JACKSON COUNTY-REYNOLDS FIELD (JXN)

Visibility reduction by helicopters NA. When local altimeter setting not received, use Mason altimeter setting and increase all MDA 60 feet, increase all Cat C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 3000 via JXN R-344 to LESSY Int/JXN 11.4 DME and hold.

ATIS	LANSING APP CON	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 357.6	128.475 (CTAF) L 257.8	121.9	121.9	122.95





HIRL Rwy 6-24 L
MIRL Rwy 14-32 L
REIL Rwy 32 L

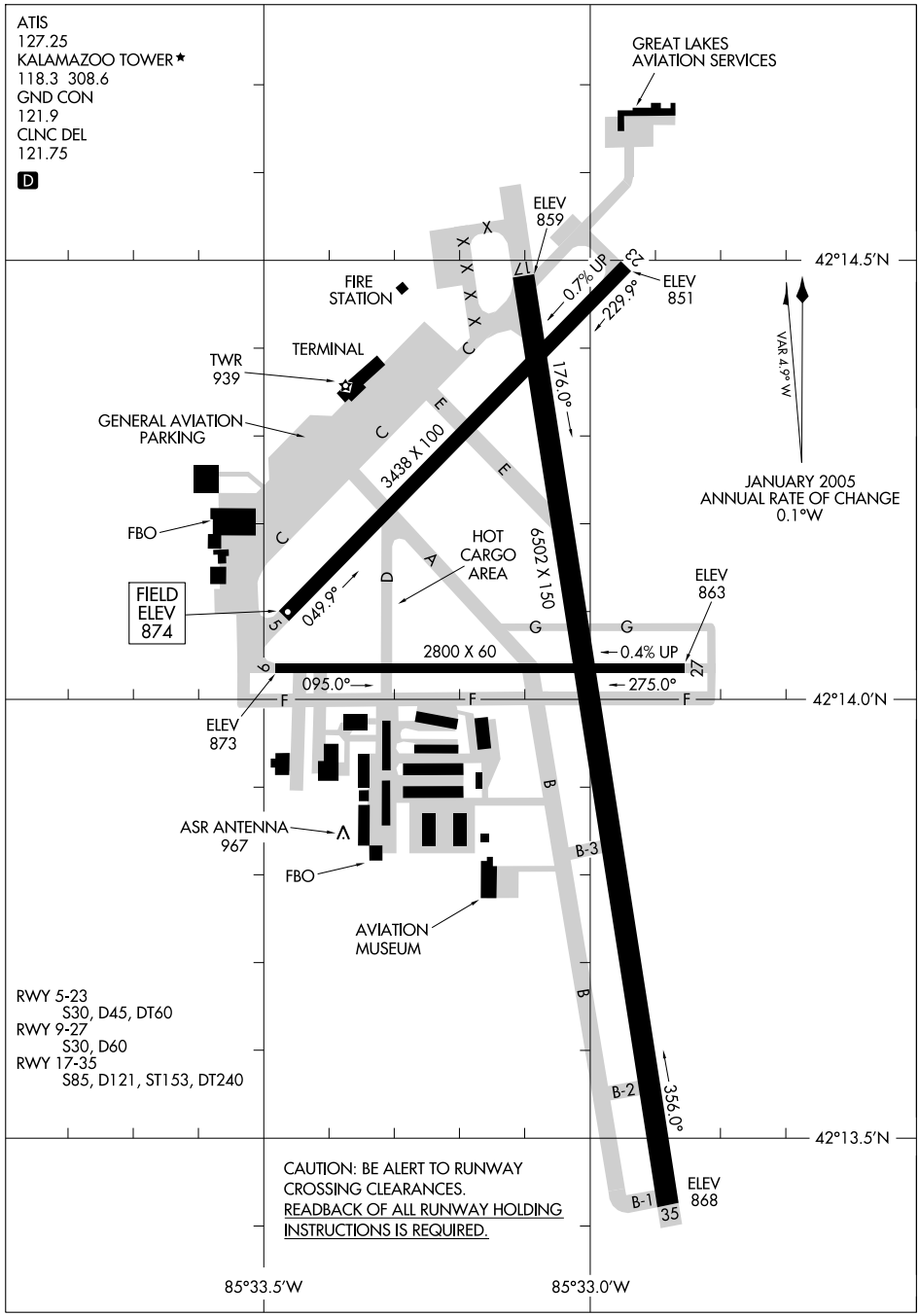
CATEGORY	A	B	C	D
S-32	1600-1 599 (600-1)		1600-1½ 599 (600-1½)	1600-1¾ 599 (600-1¾)
CIRCLING	1600-1 599 (600-1)		1600-1½ 599 (600-1½)	1640-2 639 (700-2)
TOTHY MINIMUMS				
S-32	1460-1 459 (500-1)		1460-1¼ 459 (500-1¼)	1460-1½ 459 (500-1½)
CIRCLING	1520-1 519 (600-1)		1520-1½ 519 (600-1½)	1640-2 639 (700-2)

EC-1, 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-717 (FAA)

KALAMAZOO/ BATTLE CREEK INTL (AZO)
KALAMAZOO, MICHIGAN



EC-1, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3438
049°	TDZE	874
	Apt Elev	874

GPS RWY 5

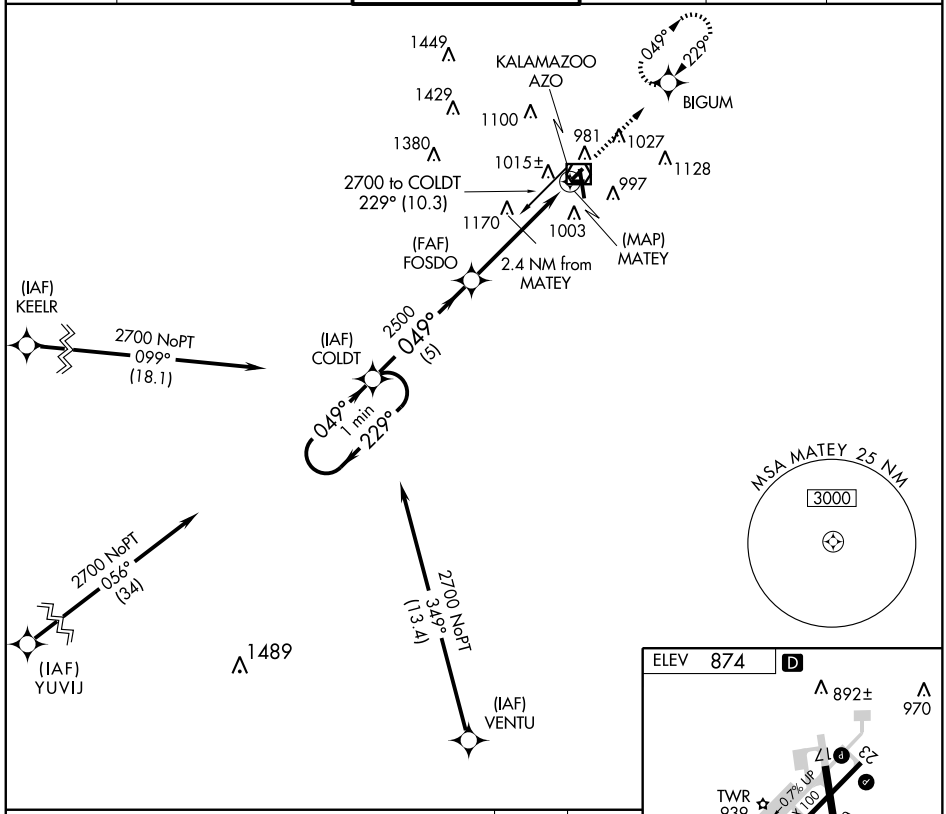
KALAMAZOO/BATTLE CREEK INTL (AZO)

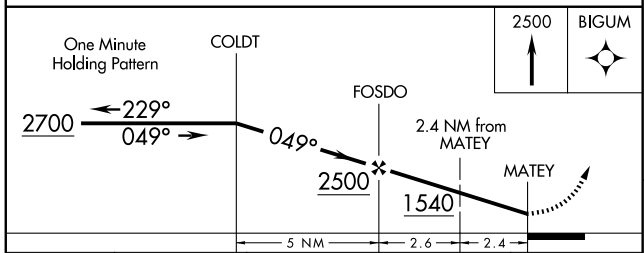
NA ASR

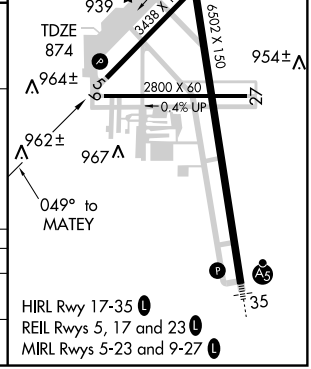
When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 120 feet, increase S-5 and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2500 direct BIGUM WP and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-5	1320-1 446 (500-1)		1320-1¼ 446 (500-1¼)	NA
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3438
217°	TDZE	874
	Apt Elev	874

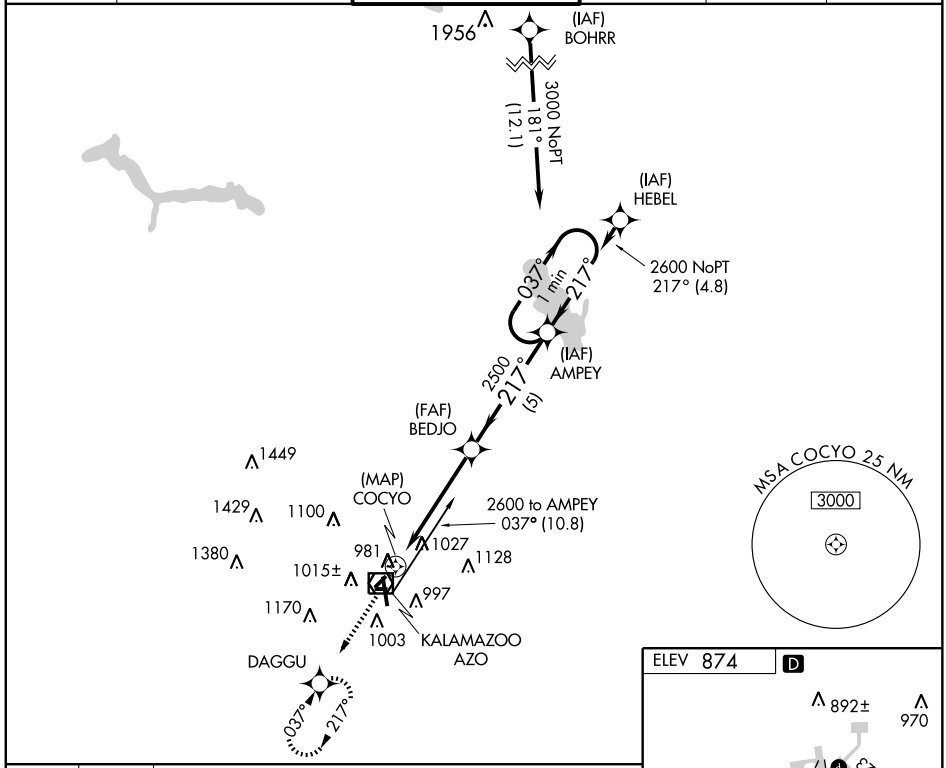
GPS RWY 23
KALAMAZOO/BATTLE CREEK INTL (AZO)

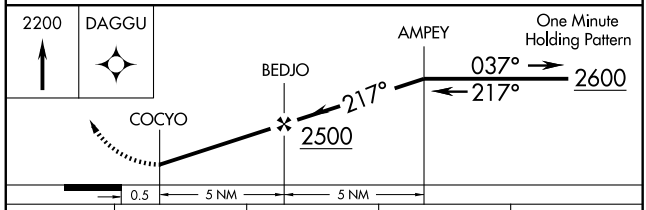
NA
ASR

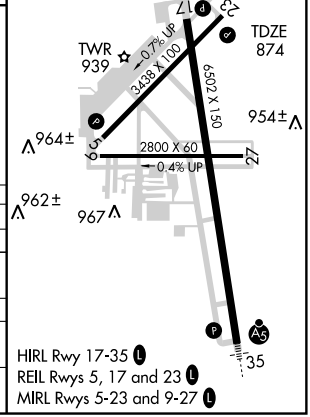
When local altimeter not received, use Grand Rapids altimeter setting.

MISSED APPROACH: Climb to 2200 direct DAGGU WP and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-23	1300-1 426 (500-1)		1300-1¼ 426 (500-1¼)	
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)
GRAND RAPIDS ALTIMETER SETTING MINIMUMS				
S-23	1400-1 526 (600-1)		1400-1½ 526 (600-1½)	1400-1¾ 526 (600-1¾)
CIRCLING	1480-1 606 (700-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-AZO	APP CRS	Rwy ldg	6502
110.9	354°	TDZE	868
		Apt Elev	874

ILS or LOC RWY 35

KALAMAZOO/BATTLE CREEK INTL (AZO)

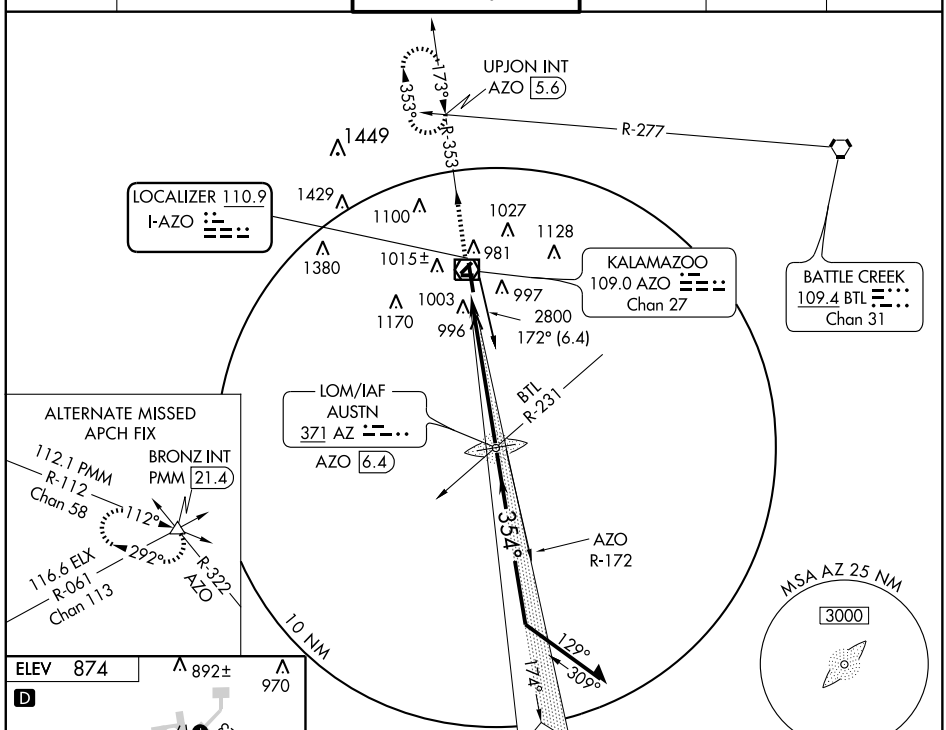
ASR

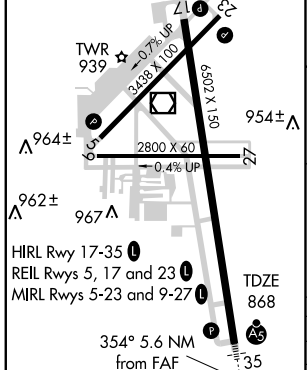
* RVR 1800 authorized with the use of FD or AP or HUD to DA.

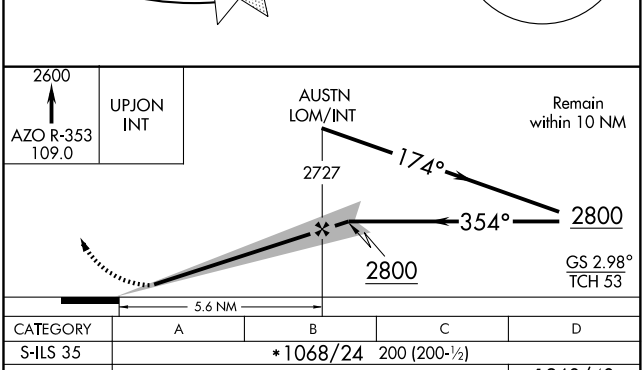
MALSR

MISSED APPROACH: Climb to 2600 via AZO VOR/DME R-353 to UPJON INT/AZO 5.6 DME and hold.

ATIS	KALAMAZOO APP CON *	KALAMAZOO TOWER *	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-ILS 35	*1068/24 200 (200-½)			
S-LOC 35	1260/24 392 (400-½)			1260/40 392 (400-¾)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-AZO	APP CRS	Rwy ldg	6502
110.9	174°	TDZE	867
		Apt Elev	874

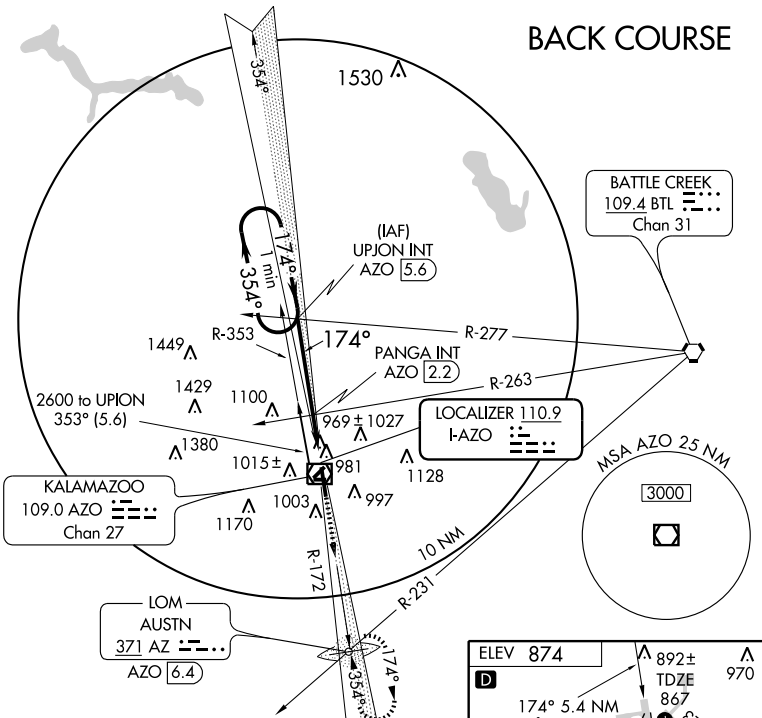
LOC BC RWY 17
KALAMAZOO/BATTLE CREEK INTL (AZO)

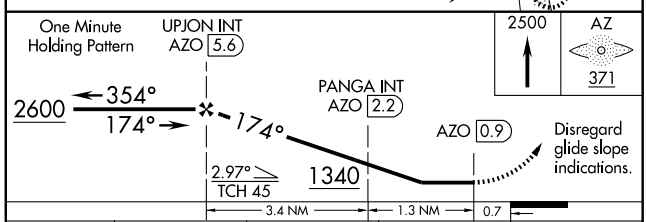
T A ASR

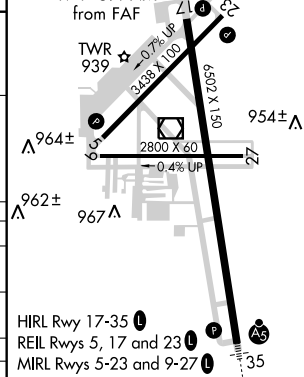
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 direct AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-17	1340-1 473 (500-1)		1340-1¼ 473 (500-1¼)	1340-1½ 473 (500-1½)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)
PANGA FIX MINIMUMS				
S-17	1220-1 353 (400-1)			1220-1¼ 353 (400-1¼)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

EC-1, 14 JAN 2010 to 11 FEB 2010

LOM AZ	APP CRS	Rwy ldg	6502
371	355°	TDZE	868
		Apt Elev	874

NDB RWY 35

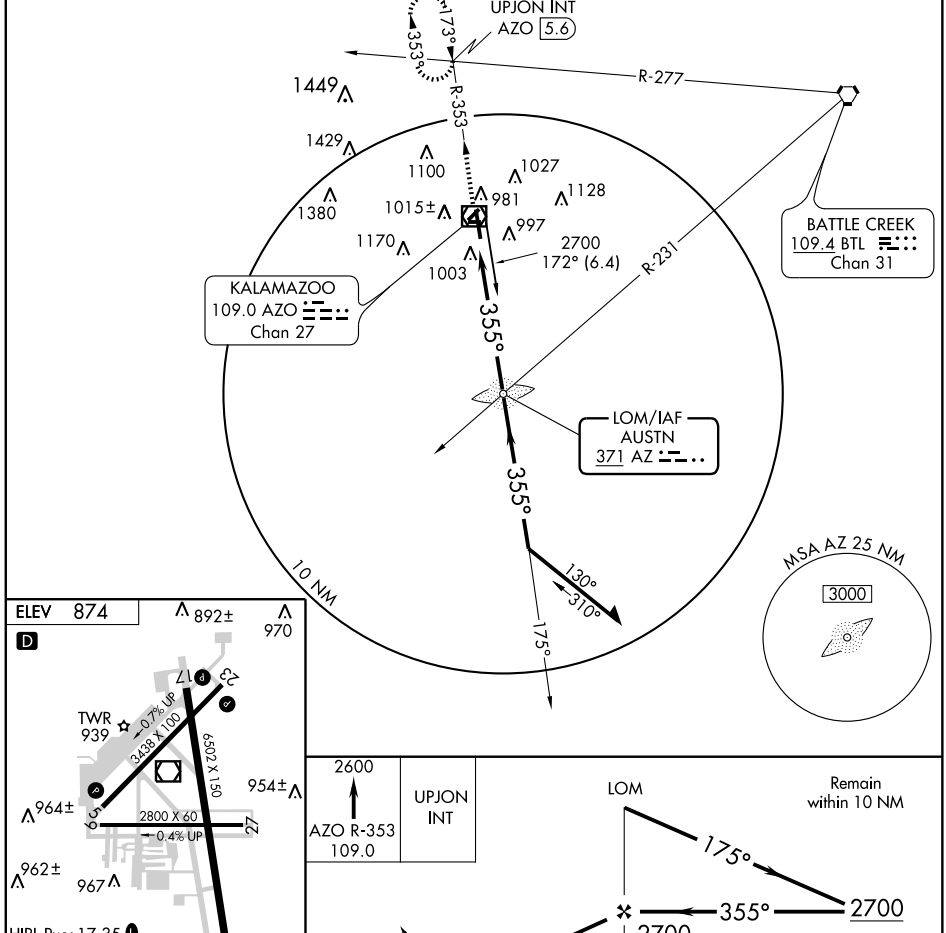
KALAMAZOO/BATTLE CREEK INTL (AZO)

ASR

MALSR

MISSED APPROACH: Climb to 2600 via AZO VOR/DME R-353 to UPJON Int/AZO 5.6 DME and hold.

ATIS	KALAMAZOO APP CON★	KALAMAZOO TOWER★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95



FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

CATEGORY	A	B	C	D
S-35	1320/40 452 (500-¾)			1320/60 452 (500-1¼)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6502
174°	TDZE	867
	Apt Elev	874

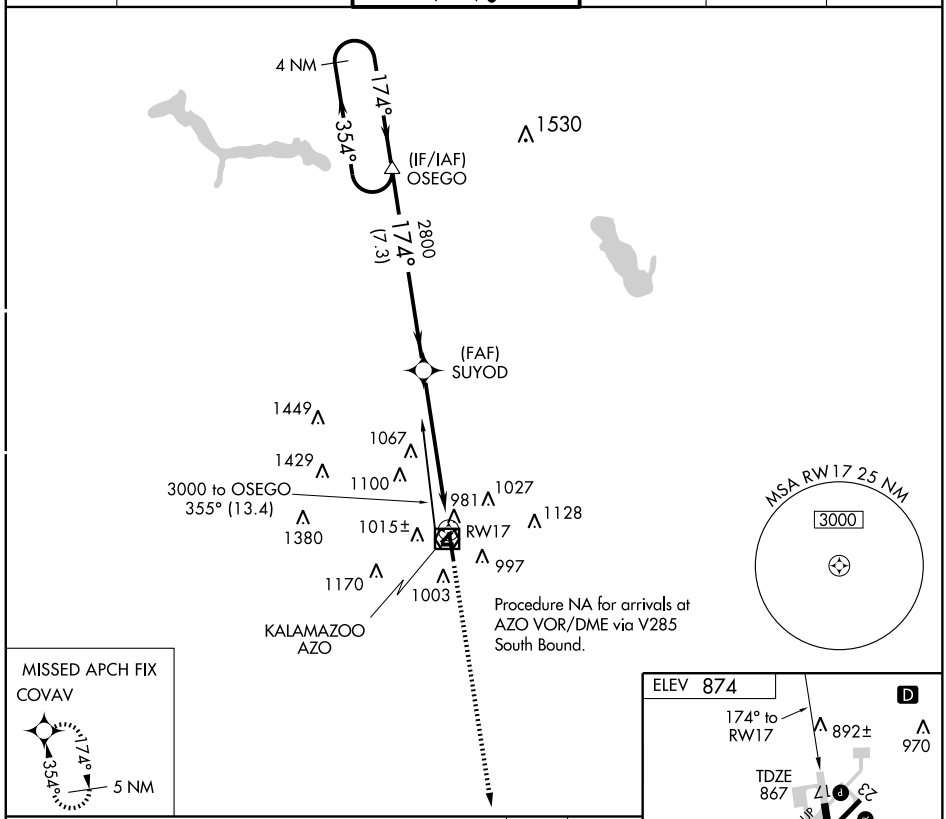
RNAV (GPS) RWY 17
KALAMAZOO/BATTLE CREEK INTL (AZO)

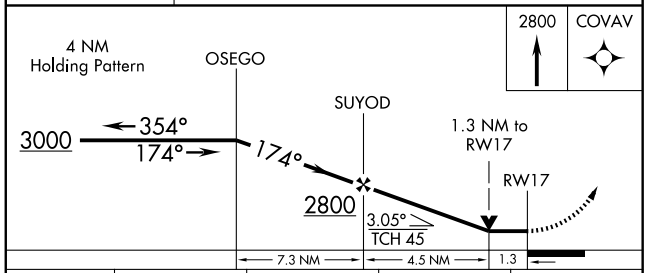
ASR

DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2800 direct COVAV and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95





CATEGORY	A	B	C	D
LNAV MDA	1320-1 453 (500-1)		1320-1¼ 453 (500-1¼)	1320-1½ 453 (500-1½)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 61102 W35A	APP CRS 354°	Rwy ldg 6502 TDZE 868 Apt Elev 874

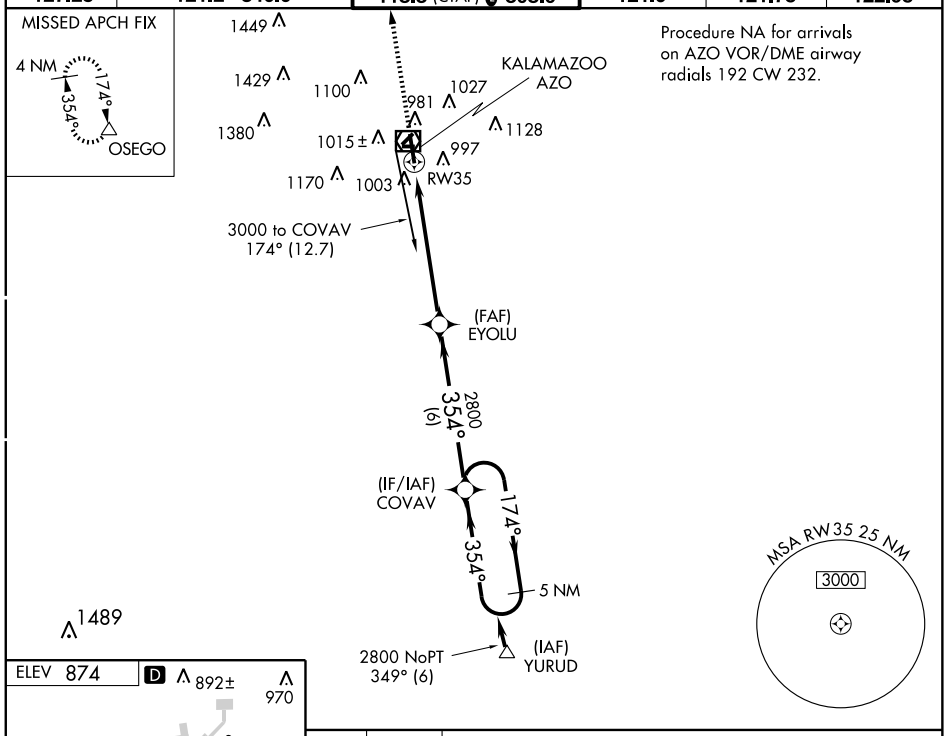
RNAV (GPS) RWY 35
KALAMAZOO/BATTLE CREEK INTL (AZO)

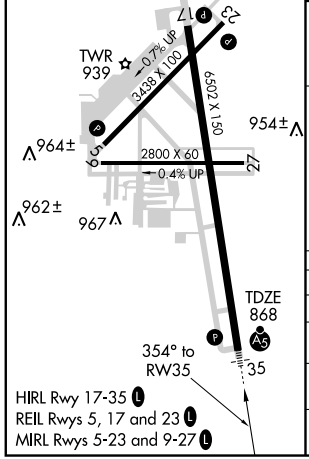
ASR: For inoperative MALSR, increase LPV all Cats visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 49°C (121°F). DME/DME RNP-0.3 NA.

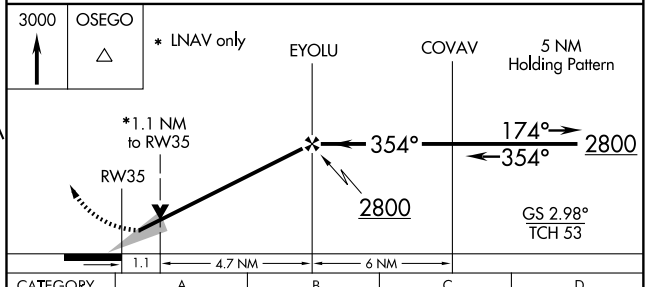
MALSR

MISSED APPROACH: Climb to 3000 direct OSEGO and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
LPV DA	1134/24 266 (300-½)			
LNAV/VNAV DA	1283/50 415 (500-1)			
LNAV MDA	1260-24 392 (400-½)			1260/50 392 (400-1)
CIRCLING	1380-1½ 506 (600-1½)			1440-2 566 (600-2)

VOR/DME AZO	APP CRS	Rwy ldg	3438
109.0	050°	TDZE	874
Chan 27		Apt Elev	874

VOR RWY 5

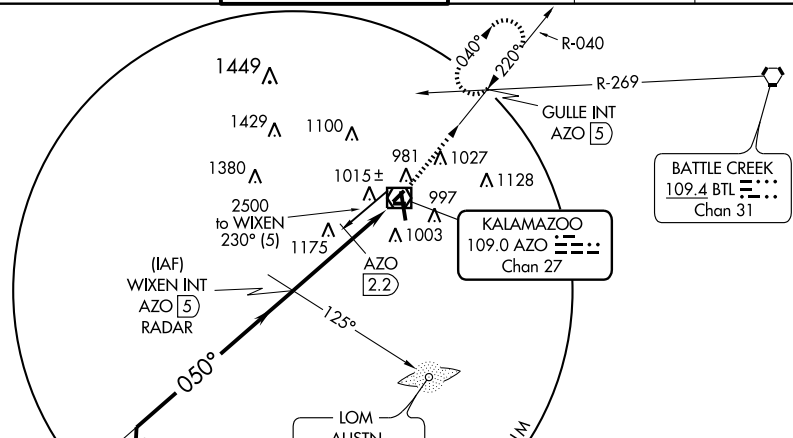
KALAMAZOO/BATTLE CREEK INTL (AZO)

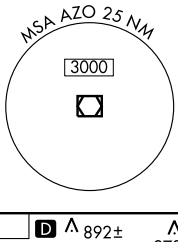
ASR

When control tower closed, procedure not authorized.

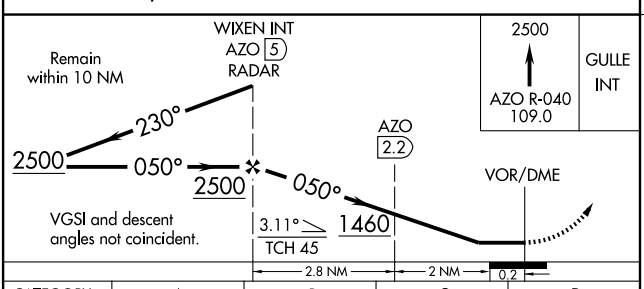
MISSED APPROACH: Climb to 2500 via AZO R-040 to GULLE Int/AZO 5 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95

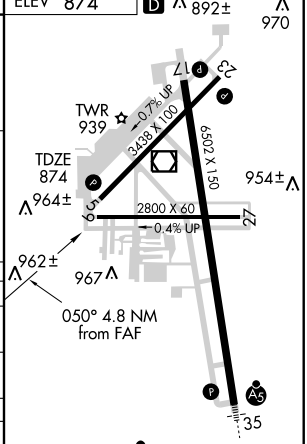




DME, ADF or AZO ASR REQUIRED



CATEGORY	A	B	C	D
S-5	1460-1	586 (600-1)	1460-1½ 586 (600-1½)	NA
CIRCLING	1460-1	586 (600-1)	1460-1½ 586 (600-1½)	NA
DME MINIMUMS				
S-5	1340-1	466 (500-1)	1340-1¼ 466 (500-1¼)	NA
CIRCLING	1340-1	466 (500-1)	1340-1½ 466 (500-1½)	NA



EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME AZO	APP CRS	Rwy ldg	6502
109.0	180°	TDZE	867
Chan 27		Apt Elev	874

VOR RWY 17

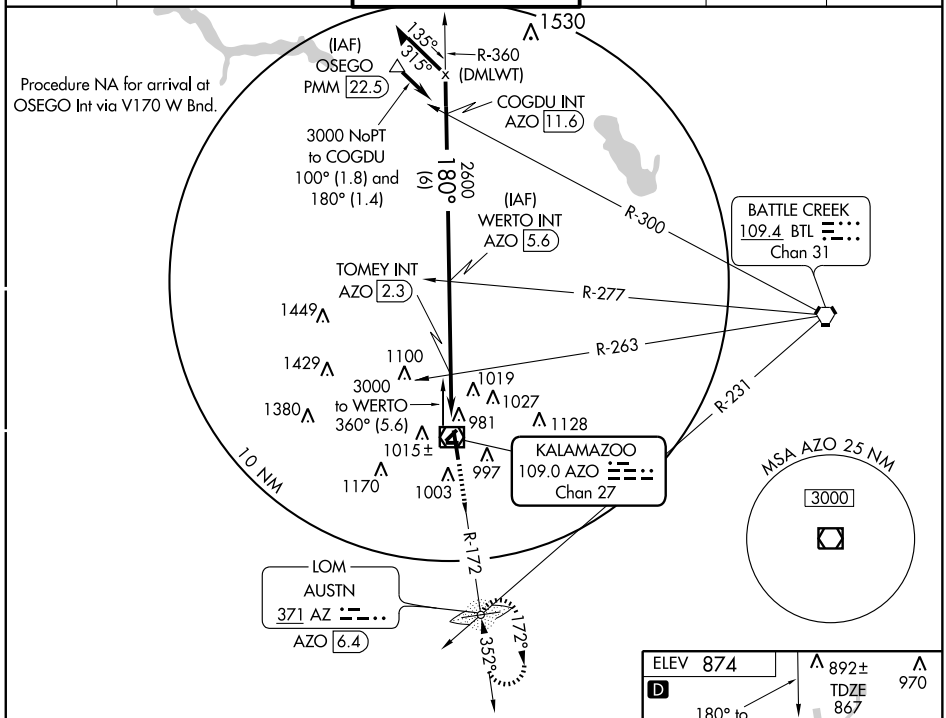
KALAMAZOO/BATTLE CREEK INTL (AZO)

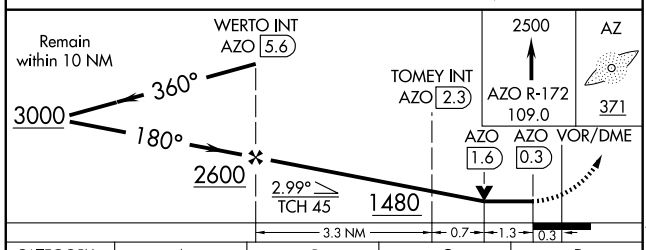
ASR

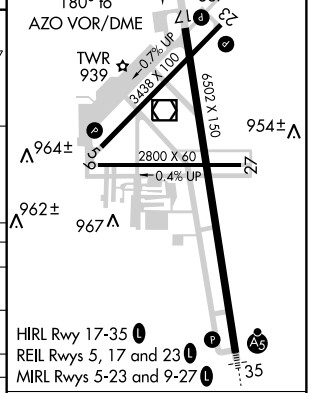
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 via AZO R-172 to AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-17	1480-1 613 (700-1)		1480-1¾ 613 (700-1¾)	1480-2 613 (700-2)
CIRCLING	1480-1 606 (700-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)
TOMEY FIX MINIMUMS				
S-17	1320-1 453 (500-1)		1320-1¼ 453 (500-1¼)	1320-1½ 453 (500-1½)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)

FAF to MAP 5.3 NM

Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME AZO	APP CRS	Rwy ldg 3438
109.0	220°	TDZE 873
Chan 27		Apt Elev 874

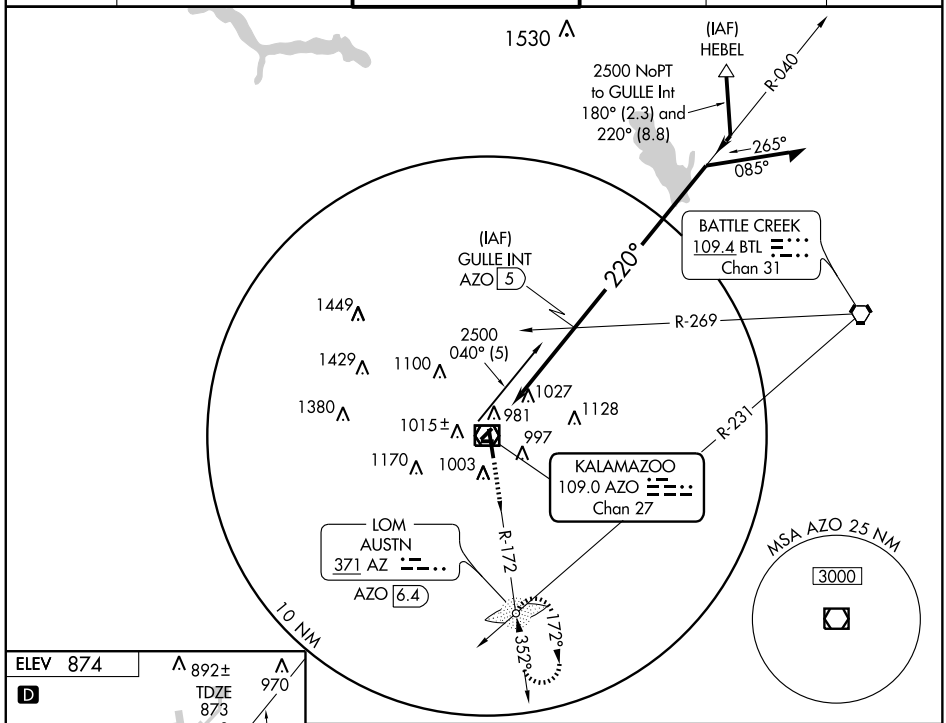
VOR RWY 23

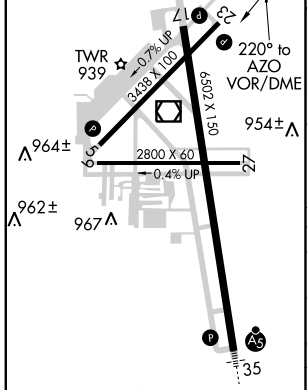
KALAMAZOO/BATTLE CREEK INTL (AZO)

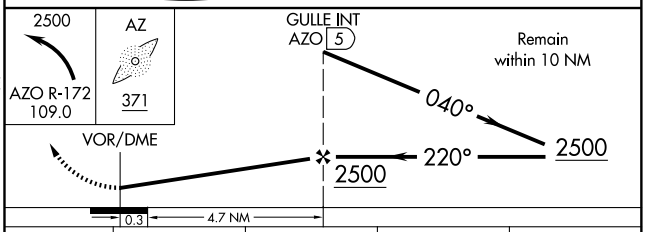
T A ASR — When Control Tower closed, except for operators with approved weather reporting service, use South Bend altimeter setting.

MISSED APPROACH: Climbing left turn to 2500 via AZO R-172 to AUSTN LOM/Int/AZO 6.4 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-23	1300-1 427 (500-1)		1300-1¼ 427 (500-1¼)	1300-1½ 427 (500-1½)
CIRCLING	1320-1 446 (500-1)	1340-1 466 (500-1)	1340-1½ 466 (500-1½)	1440-2 566 (600-2)
SOUTH BEND ALTIMETER SETTING MINIMUMS				
S-23	1520-1 647 (700-1)		1520-1¾ 647 (700-1¾)	1520-2 647 (700-2)
CIRCLING	1540-1 666 (700-1)		1560-2 686 (700-2)	1640-2½ 766 (800-2½)

HIRL Rwy 17-35 L
REIL Rwys 5, 17 and 23 L
MIRL Rwys 5-23 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME AZO 109.0 Chan 27	APP CRS 347°	Rwy ldg 6502 TDZE 868 Apt Elev 874

VOR RWY 35

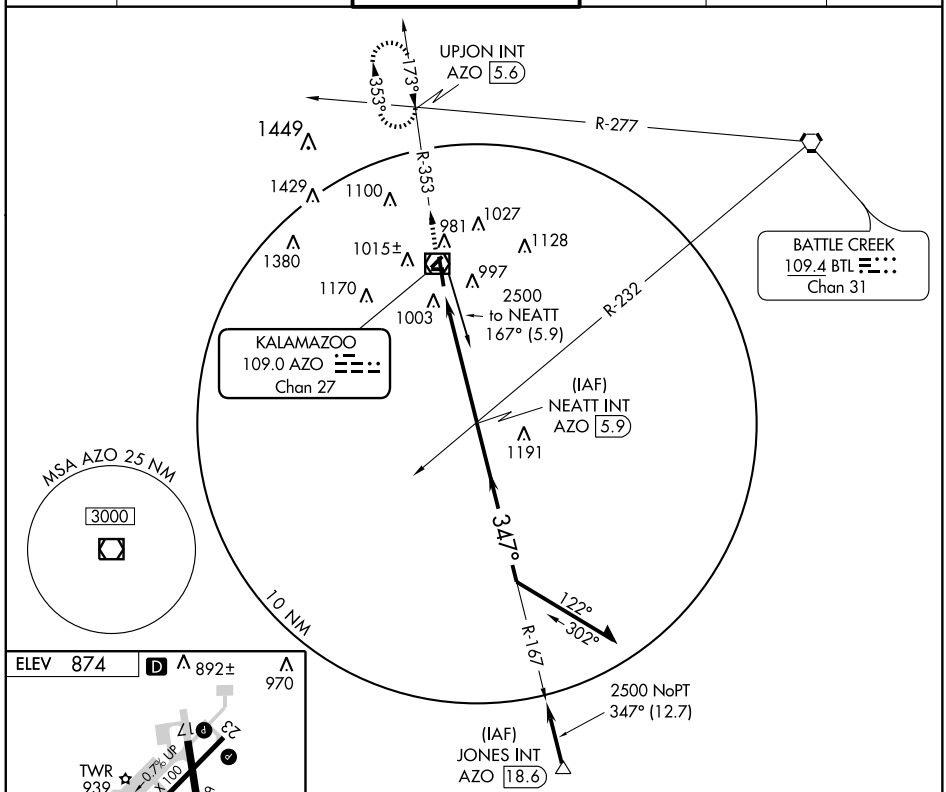
KALAMAZOO/BATTLE CREEK INTL (AZO)

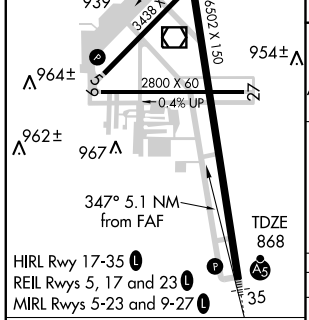
ASR: For inoperative MALSR, increase S-35 Cat D visibility to RVR 6000.

MALSR

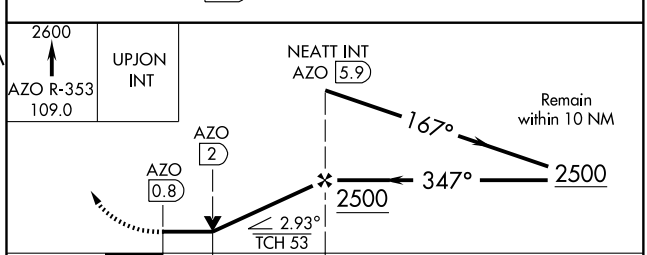
MISSED APPROACH: Climb to 2600 via AZO R-353 to UPJON Int/AZO 5.6 DME and hold.

ATIS	KALAMAZOO APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 340.9	118.3 (CTAF) L 308.6	121.9	121.75	122.95





FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42



CATEGORY	A	B	C	D
S-35	1280/24 412 (500-½)		1280/40 412 (500-¾)	1280/50 412 (500-1)
CIRCLING	1380-1 506 (600-1)		1380-1½ 506 (600-1½)	1440-2 566 (600-2)

APP CRS	Rwy ldg	3500
094°	TDZE	969
	Apt Elev	969

GPS RWY 9

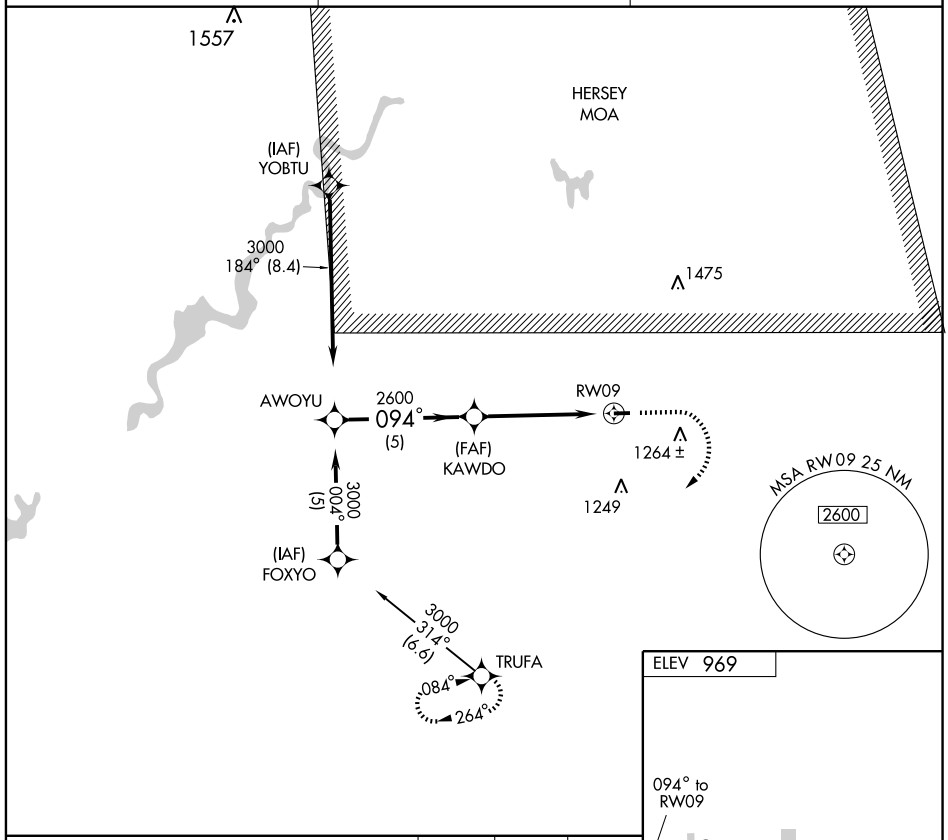
LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

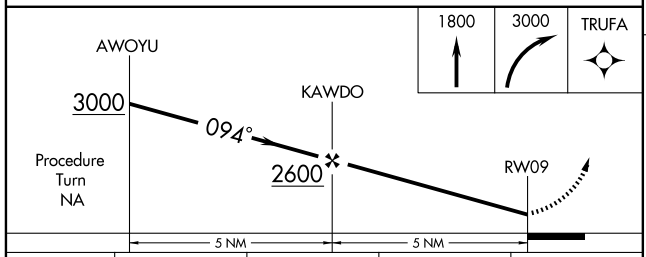
NA

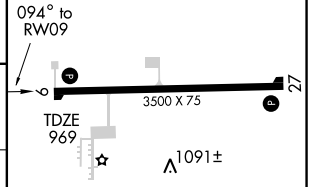
Use Roben-Hood altimeter setting.

MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 direct TRUFA WP and hold.

ROBEN-HOOD AWOS-3	GRAND RAPIDS APP CON ★	UNICOM
121.125	124.6 257.6	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-9	1400-1 431 (500-1)		NA	
CIRCLING	1440-1 471 (500-1)	1580-1 611 (700-1)	NA	

MIRL Rwy 9-27 L

REIL Rwys 9 and 27 L

APP CRS	Rwy ldg	3500
274°	TDZE	969
	Apt Elev	969

GPS RWY 27

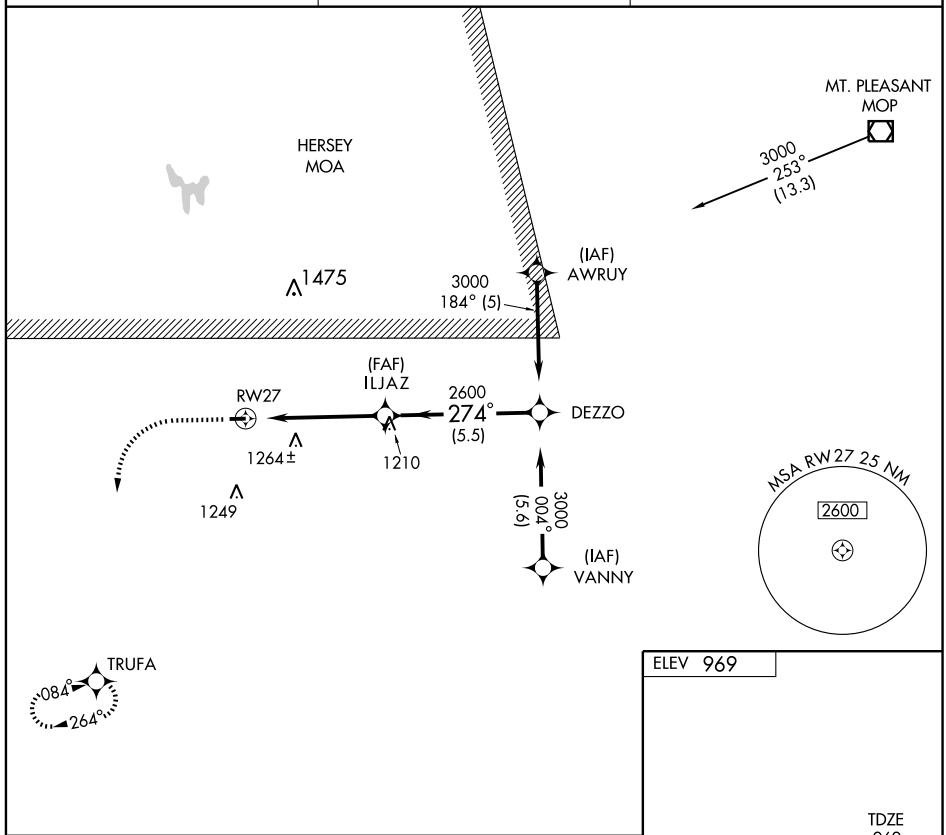
LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

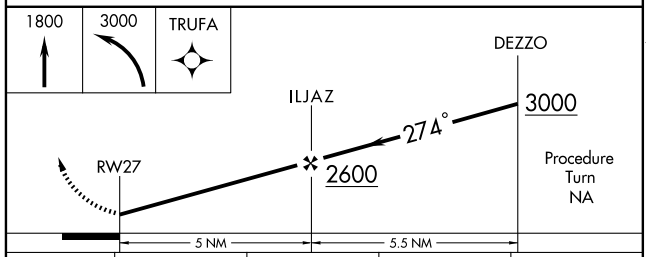
NA

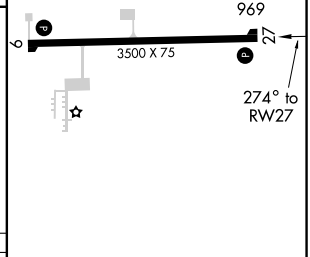
Use Roben-Hood altimeter setting.

MISSED APPROACH: Climb to 1800, then climbing left turn to 3000 direct TRUFA WP and hold.

ROBEN-HOOD AWOS-3	GRAND RAPIDS APP CON *	UNICOM
121.125	124.6 257.6	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-27	1460-1 491 (500-1)		NA	
CIRCLING	1460-1 491 (500-1)	1580-1 611 (700-1)	NA	

MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME HIC 117.6 Chan 123	APP CRS 112°	Rwy ldg 3500 TDZE 969 Apt Elev 969

VOR/DME RWY 9

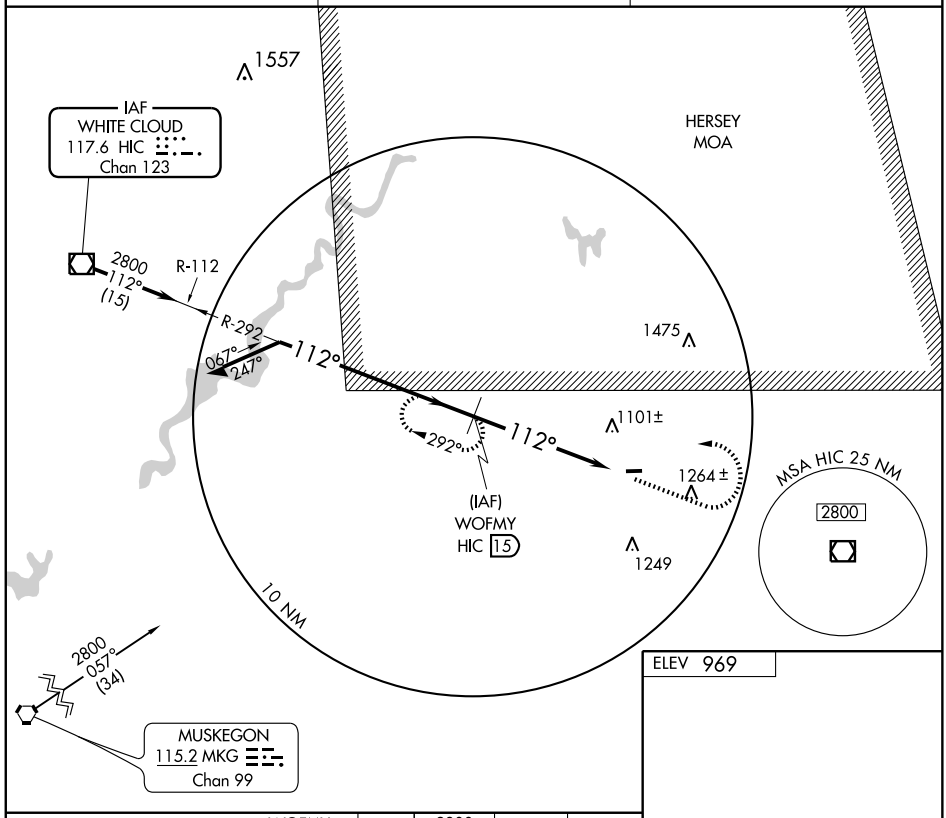
LAKEVIEW AIRPORT-GRIFFITH FIELD (13C)

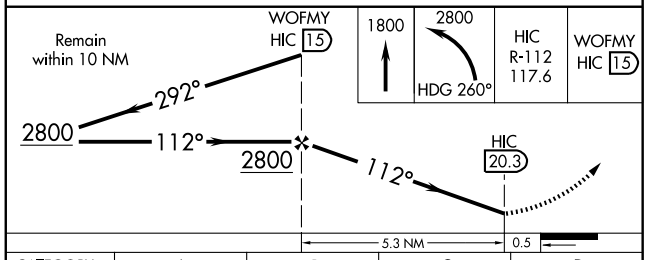
NA

Use Roben-Hood altimeter setting.

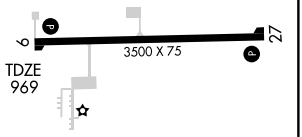
MISSED APPROACH: Climb to 1800, then climbing left turn to 2800 via heading 260° and HIC VOR/DME R-112 to WOFMY and hold.

ROBEN-HOOD AWOS-3	GRAND RAPIDS APP CON *	UNICOM
121.125	124.6 257.6	122.8 (CTAF) L





ELEV 969



MIRL Rwy 9-27 L

REIL Rwys 9 and 27 L

CATEGORY	A	B	C	D
S-9	1400-1 431 (500-1)	1400-1¼ 431 (500-1¼)	NA	
CIRCLING	1440-1 471 (500-1)	1580-1¼ 611 (700-1¼)	NA	

Knots	60	90	120	150	180
Min:Sec					

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME VWV 113.1 Chan 78	APP CRS 360°	Rwy ldg N/A TDZE N/A Apt Elev 669

VOR or GPS-A

LAMBERTVILLE/ TOLEDO SUBURBAN (DUH)

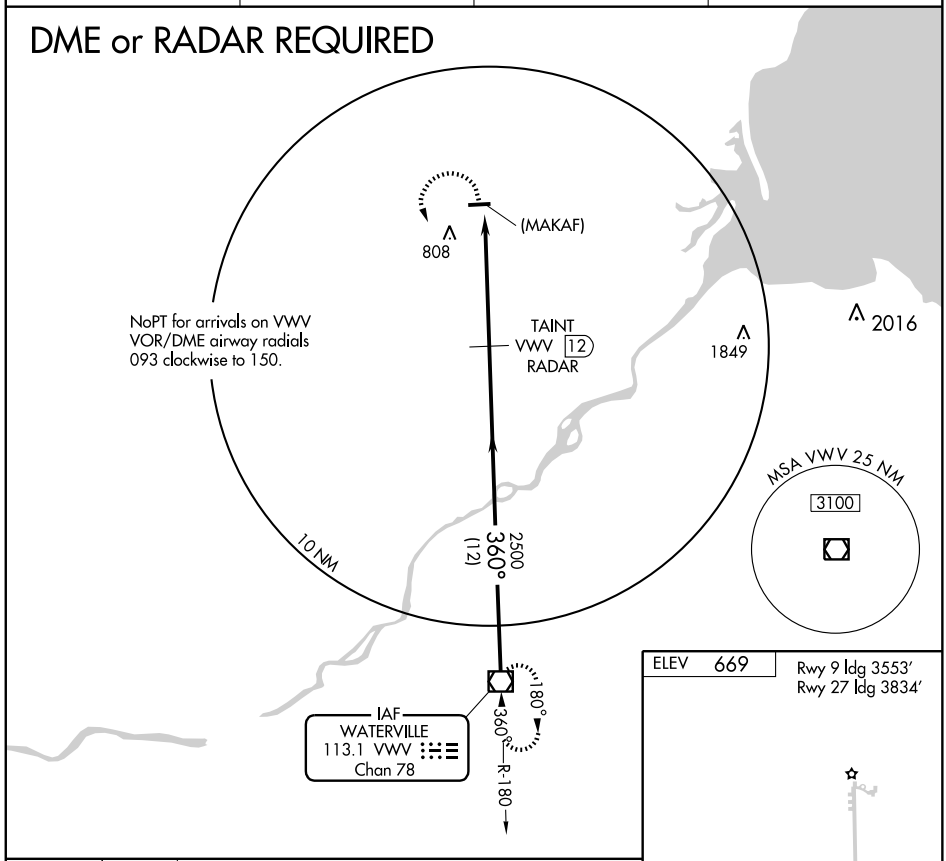
NA

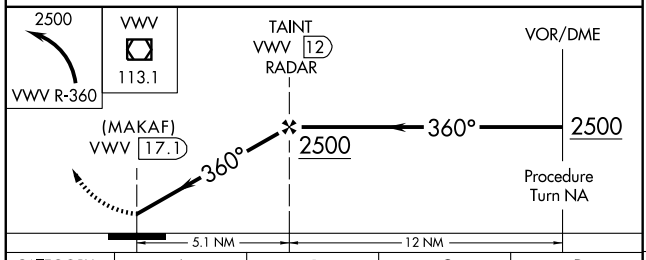
Use Toledo Express altimeter setting.

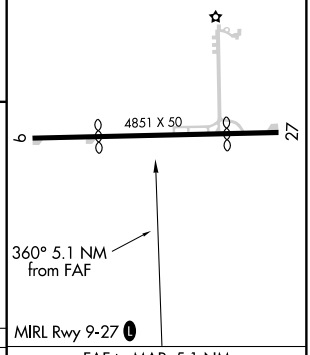
MISSED APPROACH: Climbing left turn to 2500 via VWV R-360 to VWV VOR/DME and hold.

AWOS-3	TOLEDO APP CON	GCO	UNICOM
119.175	134.35 317.55	121.725	122.7 (CTAF) L

DME or RADAR REQUIRED







CATEGORY	A	B	C	D
CIRCLING	1160-1 496 (500-1)		1160-1½ 496 (500-1½)	NA

FAF to MAP 5.1 NM

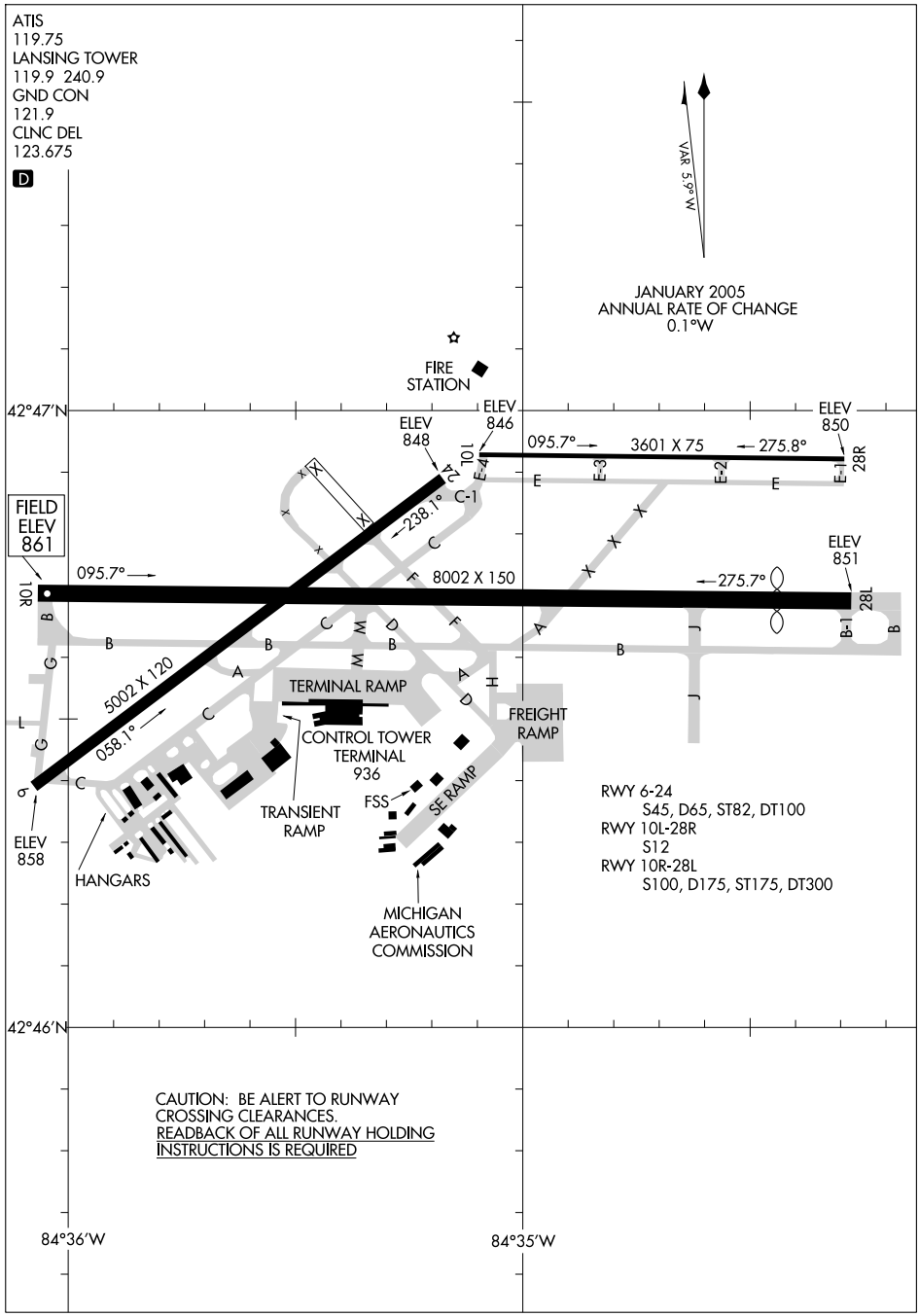
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-224 (FAA)

LANSING/ CAPITAL CITY (LAN)
LANSING, MICHIGAN



EC-1, 14 JAN 2010 to 11 FEB 2010

LOC I-CPQ	APP CRS	Rwy ldg	7251
111.7	096°	TDZE	861
		Apt Elev	861

ILS or LOC RWY 10R
LANSING/ CAPITAL CITY (LAN)

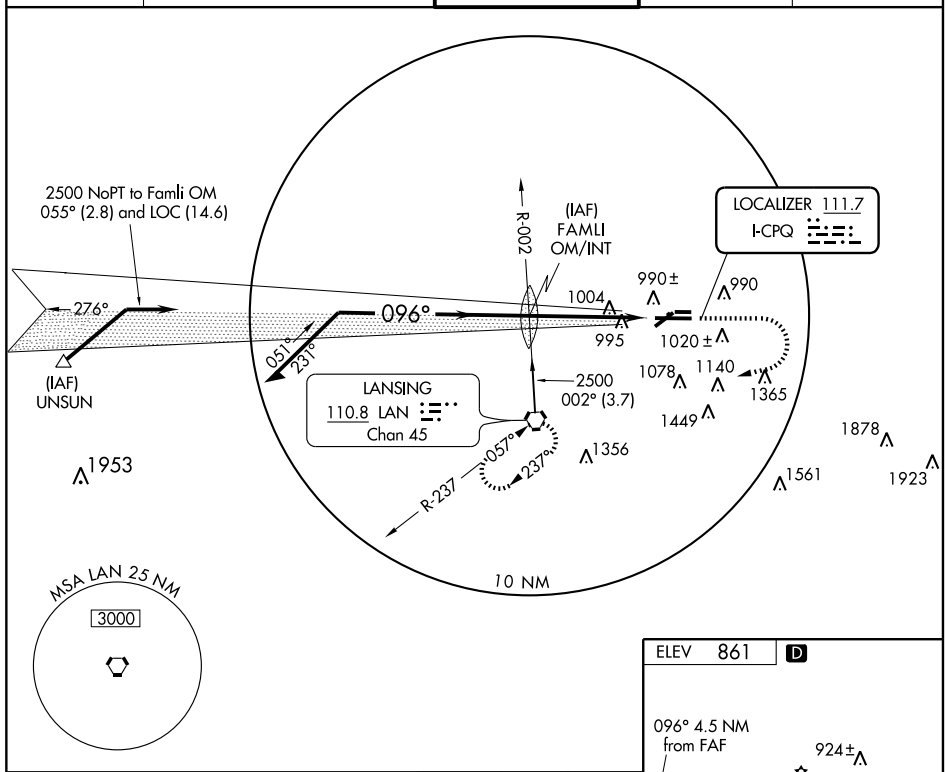
ASR

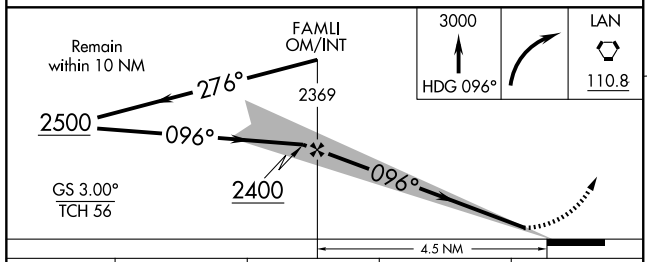
*RVR 1800 authorized with the use of FD or AP or HUD to DA.

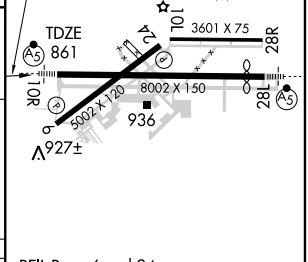
MALSR

MISSED APPROACH: Climb to 3000 via heading 096°, then right turn direct LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675







REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

CATEGORY	A	B	C	D
S-ILS 10R	*1061/24 200 (200-½)			
S-LOC 10R	1320/24 459 (500-½)		1320/40 459 (500-¾)	1320/50 459 (500-1)
CIRCLING	1320-1 459 (500-1)		1360-1½ 499 (500-1½)	1440-2 579 (600-2)

FAF to MAP 4.5 NM					
Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

ILS or LOC RWY 28L
LANSING/CAPITAL CITY (LAN)

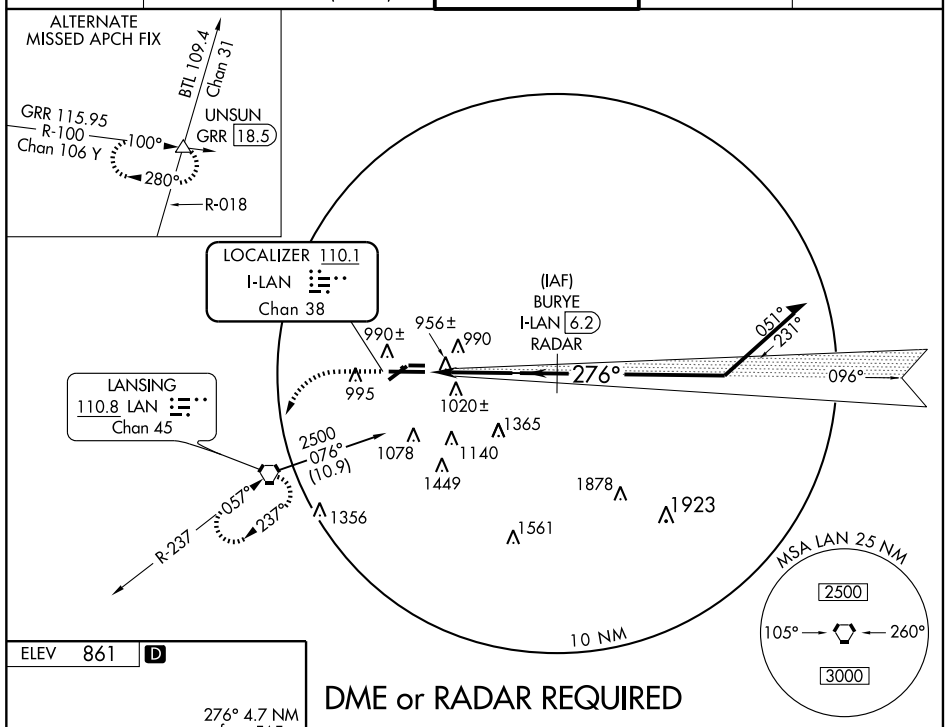
LOC/DME I-LAN	APP CRS	Rwy ldg	7251
110.1	276°	TDZE	851
Chan 38		Apt Elev	861

ASR — DME or RADAR REQUIRED

MALSR

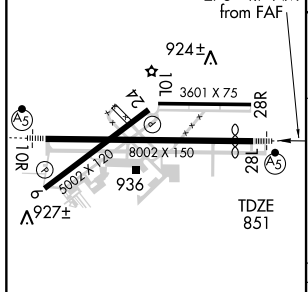
MISSED APPROACH: Climb to 2500, then left turn direct LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675



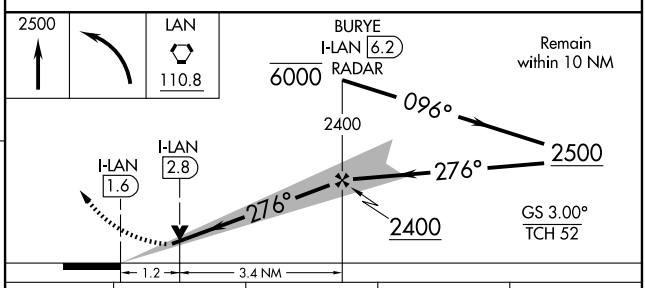
EC-1. 14 JAN 2010 to 11 FEB 2010

DME or RADAR REQUIRED



REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-ILS 28L	1051/24 200 (200-½)			
S-LOC 28L	1300/24 449 (500-½)		1300/40 449 (500-¾)	
CIRCLING	1380-1 519 (600-1)		1380-1½ 519 (600-1½)	1440-2 579 (600-2)

WAAS CH 61314 W10A	APP CRS 096°	Rwy ldg 7251 TDZE 861 Apt Elev 861

RNAV (GPS) RWY 10R
LANSING/CAPITAL CITY (LAN)

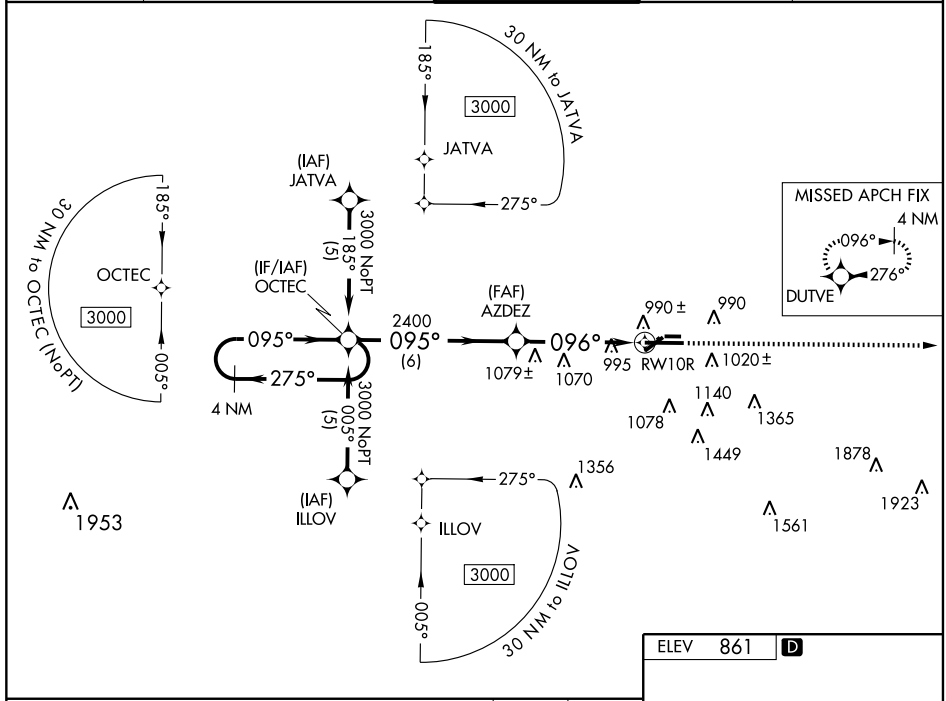
ASR

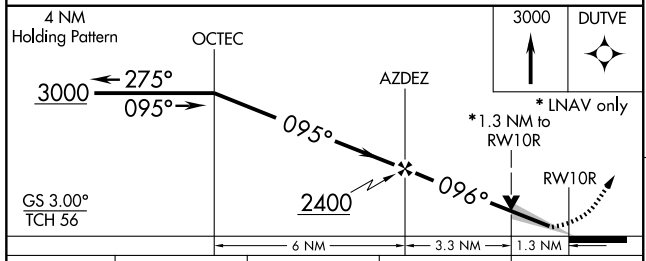
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

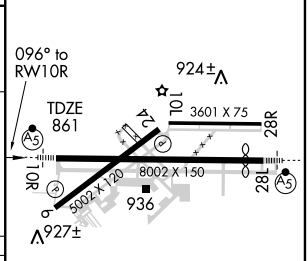
MALSR

MISSED APPROACH: Climb to 3000 direct DUTVE and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675







CATEGORY	A	B	C	D
LPV DA	1061/24 200 (200-½)			
LNAV/VNAV DA	1290/50 429 (500-1)			
LNAV MDA	1320/24 459 (500-½)		1320/40 459 (500-¾)	1320/50 459 (500-1)
CIRCLING	1380-1 519 (600-1)		1380-1½ 519 (600-1½)	1440-2 579 (600-2)

REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

WAAS CH 50413 W24A	APP CRS 238°	Rwy ldg 5002 TDZE 857 Apt Elev 861

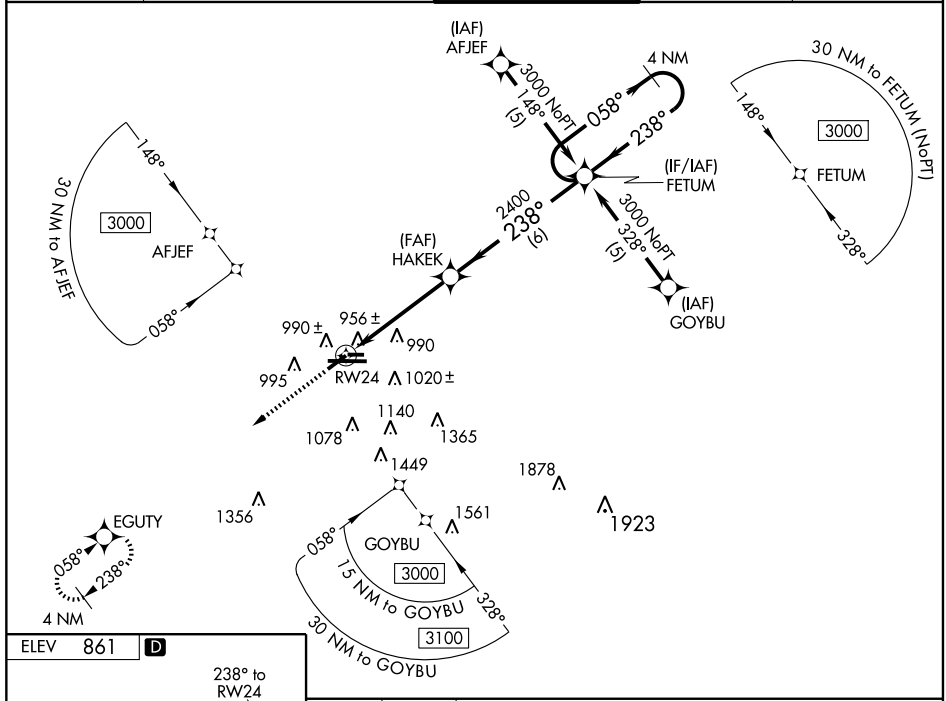
RNAV (GPS) RWY 24
LANSING/CAPITAL CITY (LAN)

ASR

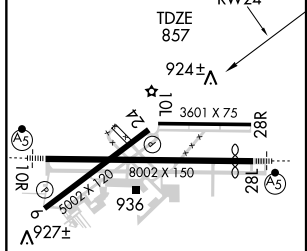
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

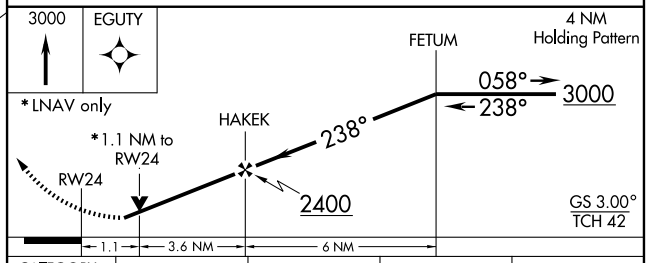
MISSED APPROACH: Climb to 3000 direct EGUTY and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675



ELEV 861 D





CATEGORY	A	B	C	D
LPV DA	1215-1¼ 358 (400-1¼)			
LNAV/VNAV DA	1254-1½ 397 (400-1½)			
LNAV MDA	1240-1 383 (400-1)			1240-1¼ 383 (400-1¼)
CIRCLING	1380-1 519 (600-1)		1380-1½ 519 (600-1½)	1440-2 579 (600-2)

REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 40414 W28A	APP CRS 276°	Rwy ldg 7251 TDZE 851 Apt Elev 861

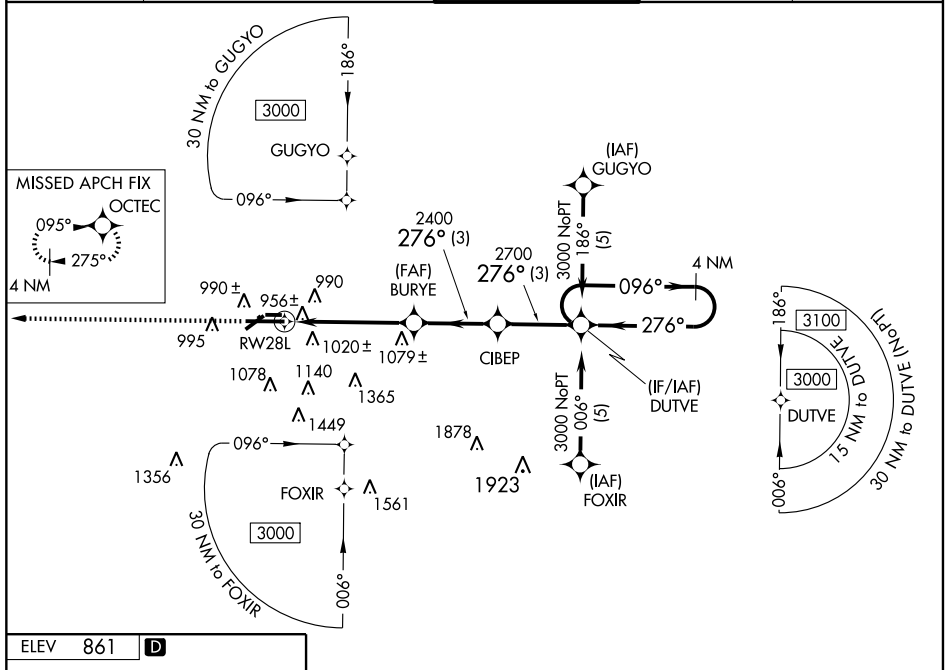
RNAV (GPS) RWY 28L
LANSING/CAPITAL CITY (LAN)

ASR — For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

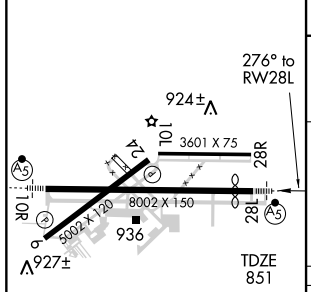
MALSR

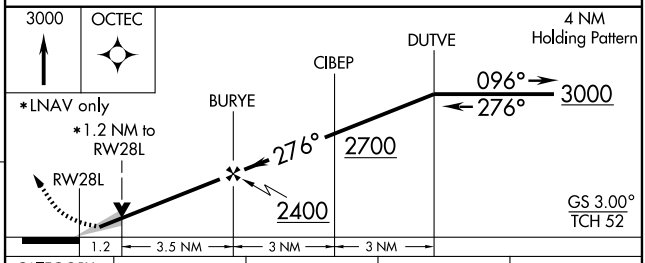
MISSED APPROACH: Climb to 3000 direct OCTEC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675



ELEV 861 D





CATEGORY	A	B	C	D
LPV DA	1051/24 200 (200-½)			
LNAV/VNAV DA	1370/60 519 (600-1¼)			
LNAV MDA	1280/24 429 (500-½)		1280/40 429 (500-¾)	1280/50 429 (500-1)
CIRCLING	1380-1 519 (600-1)		1380-1½ 519 (600-1½)	1440-2 579 (600-2)

REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

VORTAC LAN	APP CRS	Rwy ldg 5002
110.8	057°	TDZE 859
Chan 45		Apt Elev 861

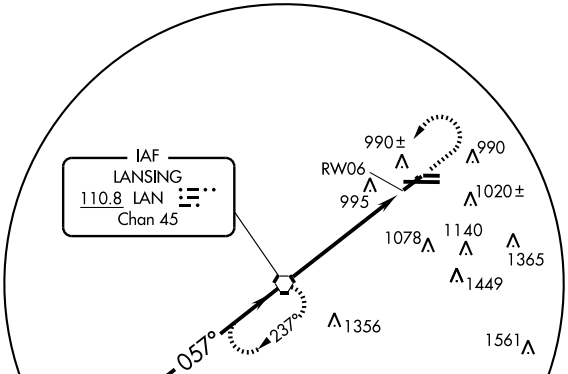
VOR or GPS RWY 6

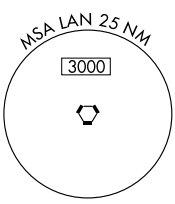
LANSING/CAPITAL CITY (LAN)

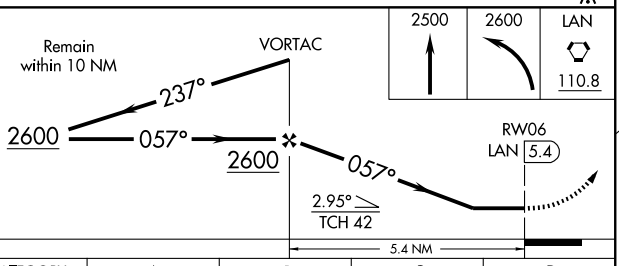
ASR

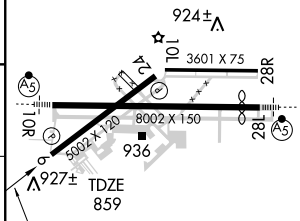
MISSED APPROACH: Climb to 2500, then climbing left turn to 2600 direct LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675









REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

CATEGORY	A	B	C	D
S-6	1320-1 461 (500-1)		1320-1¼ 461 (500-1¼)	1320-1½ 461 (500-1½)
CIRCLING	1320-1 459 (500-1)		1360-1½ 499 (500-1½)	1440-2 579 (600-2)

FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC LAN	APP CRS	Rwy ldg	5002
110.8	237°	TDZE	857
Chan 45		Apt Elev	861

VOR RWY 24

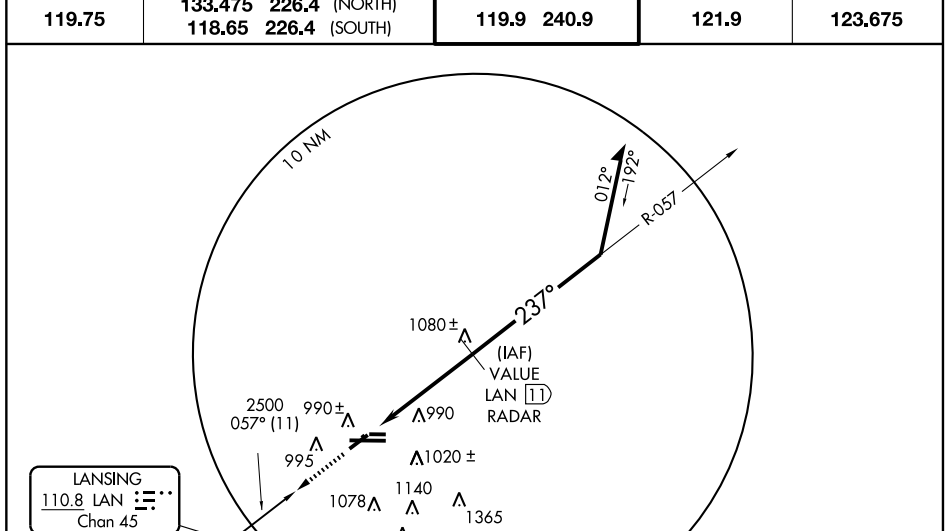
LANSING/CAPITAL CITY (LAN)

ASR

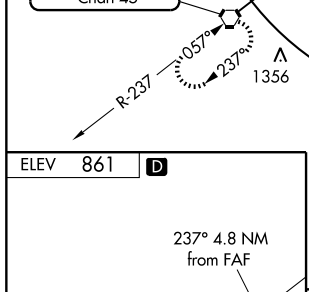
DME or RADAR Required.
Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 direct LAN VORTAC and hold.

ATIS	LANSING APP CON	LANSING TOWER	GND CON	CLNC DEL
119.75	133.475 226.4 (NORTH) 118.65 226.4 (SOUTH)	119.9 240.9	121.9	123.675



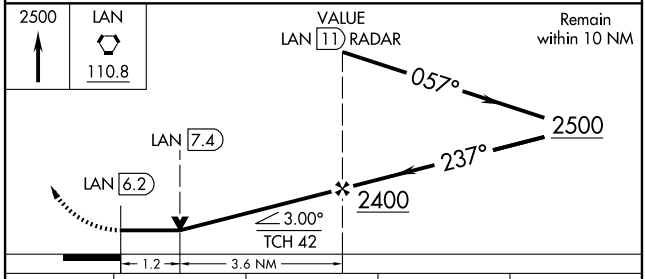
ELEV 861 D



REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

DME or RADAR REQUIRED



CATEGORY	A	B	C	D
S-24	1260-1	403 (400-1)	1260-1¼	403 (400-1¼)
CIRCLING	1380-1	519 (600-1)	1380-1½ 519 (600-1½)	1440-2 579 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 080°	Rwy ldg N/A TDZE N/A Apt Elev 844

VOR-A

LAPEER/ DUPONT-LAPEER (D95)

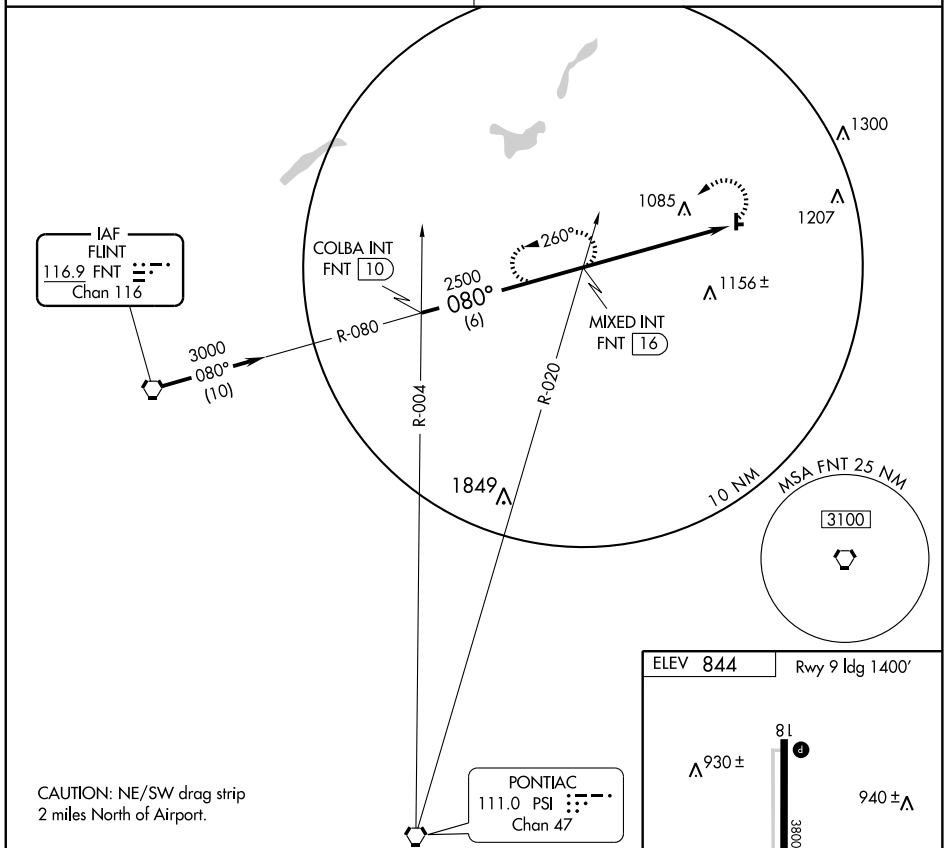
Use Flint altimeter setting.

NA

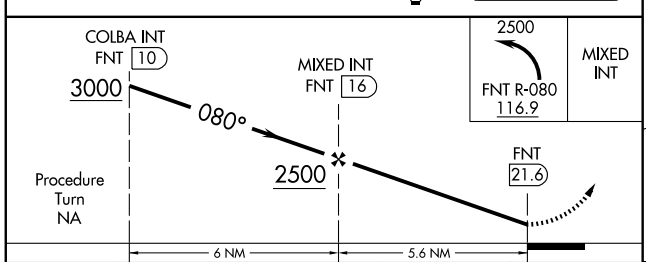
MISSED APPROACH: Climbing left turn to 2500 via FNT R-080 to MIXED INT/FNT 16 DME and hold.

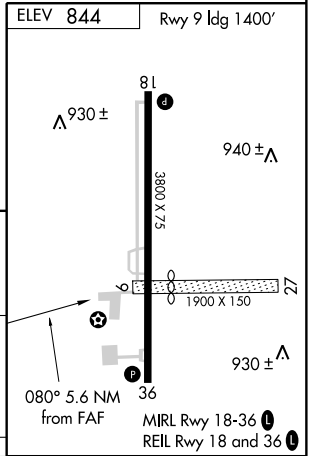
FLINT APP CON ★
118.8 257.9

UNICOM
123.0 (CTAF) L



CAUTION: NE/SW drag strip 2 miles North of Airport.





CATEGORY	A	B	C	D
CIRCLING	1460-1 616 (700-1)	1460-1¼ 616 (700-1¼)	1460-1¾ 616 (700-1¾)	NA

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3732
095°	TDZE	919
	Apt Elev	920

RNAV (GPS) RWY 9

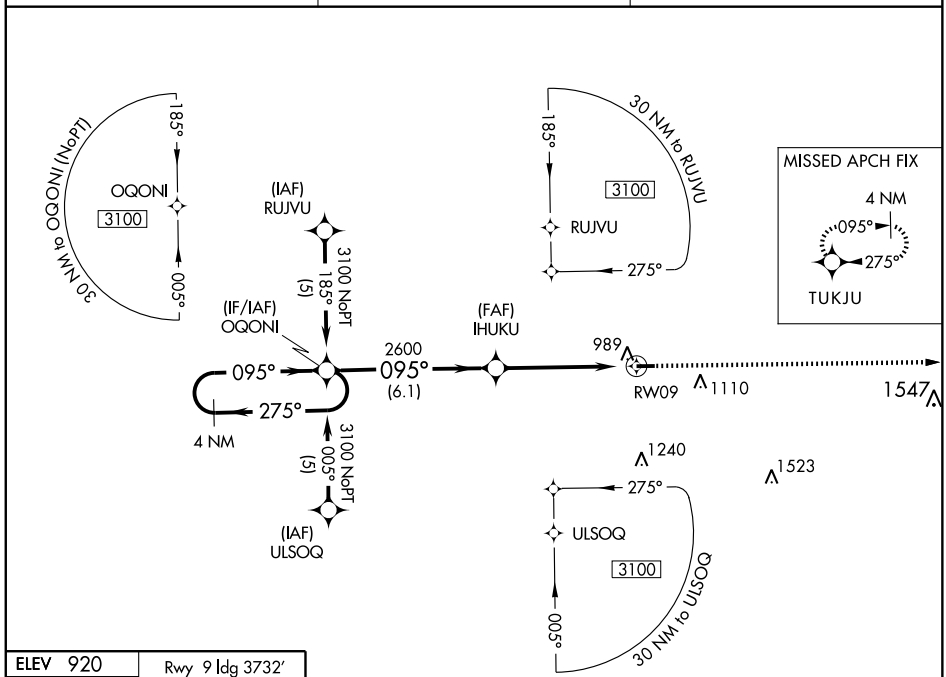
LINDEN/ PRICE'S (9G2)

T
A NA

Use Flint altimeter setting; when not received, use Howell altimeter setting. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2900 direct TUKJU and hold.

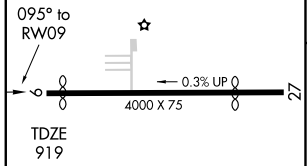
FLINT ASOS	FLINT APP CON*	UNICOM
133.15	118.8 257.9	123.0 (CTAF) L

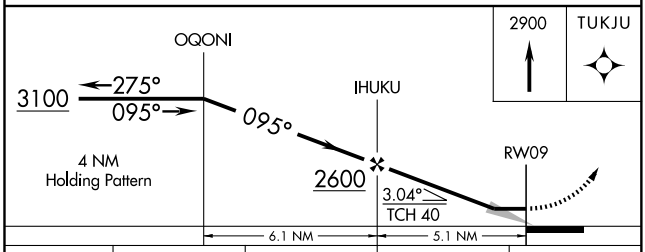


EC-1, 14 JAN 2010 to 11 FEB 2010

ELEV 920

Rwy 9 ldg 3732'
Rwy 27 ldg 3200'





CATEGORY	A	B	C	D
LNAV MDA	1400-1 481 (500-1)		NA	
CIRCLING	1460-1 540 (600-1)		NA	

REIL Rwy 9 L
MIRL Rwy 9-27 L

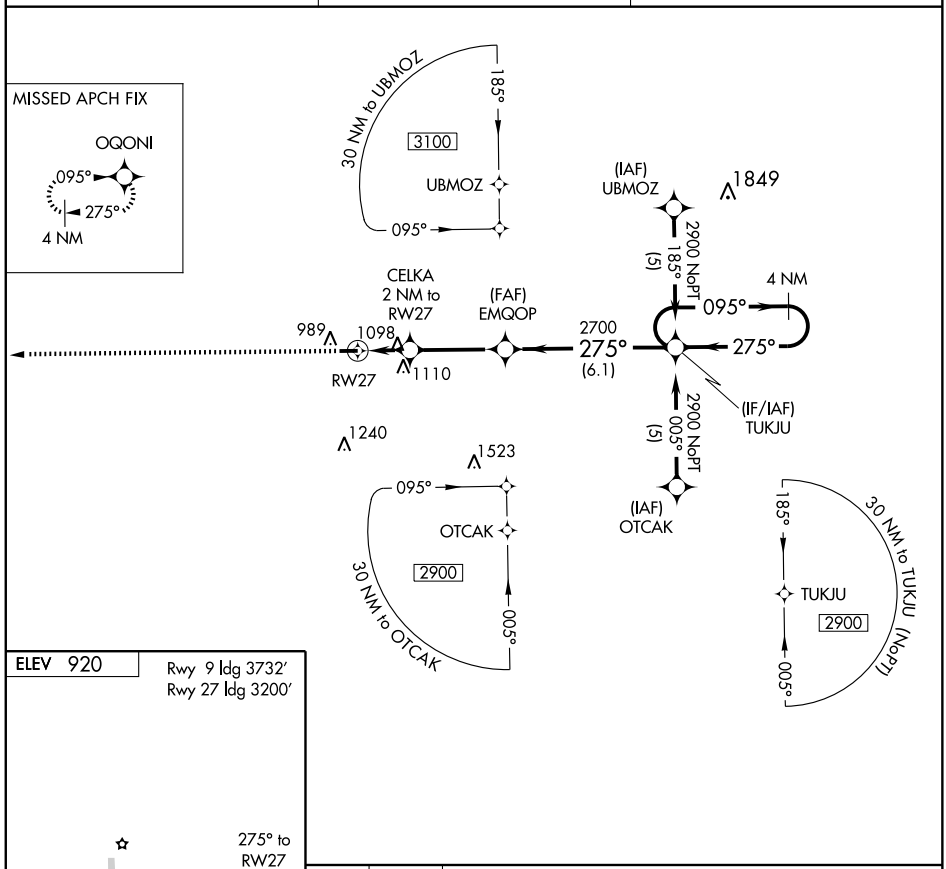
APP CRS	Rwy ldg	3200
275°	TDZE	915
	Apt Elev	920

RNAV (GPS) RWY 27
LINDEN/ PRICE'S (9G2)

Use Flint altimeter setting; when not received, use Howell altimeter setting. DME/DME RNP-0.3 NA.

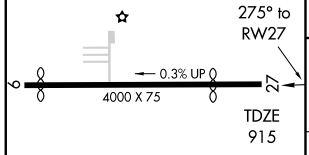
MISSED APPROACH: Climb to 3100 direct OQONI and hold.

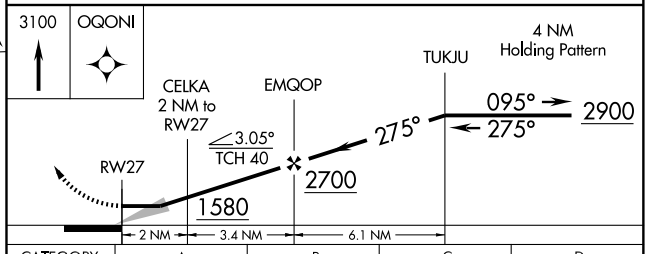
FLINT ASOS	FLINT APP CON ★	UNICOM
133.15	118.8 257.9	123.0 (CTAF) L



ELEV 920

Rwy 9 ldg 3732'
Rwy 27 ldg 3200'





CATEGORY	A	B	C	D
LNAV MDA	1400-1 485 (500-1)		NA	
CIRCLING	1460-1 540 (600-1)		NA	

REIL Rwy 9 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC FNT 116.9 Chan 116	APP CRS 192°	Rwy ldg N/A TDZE N/A Apt Elev 920

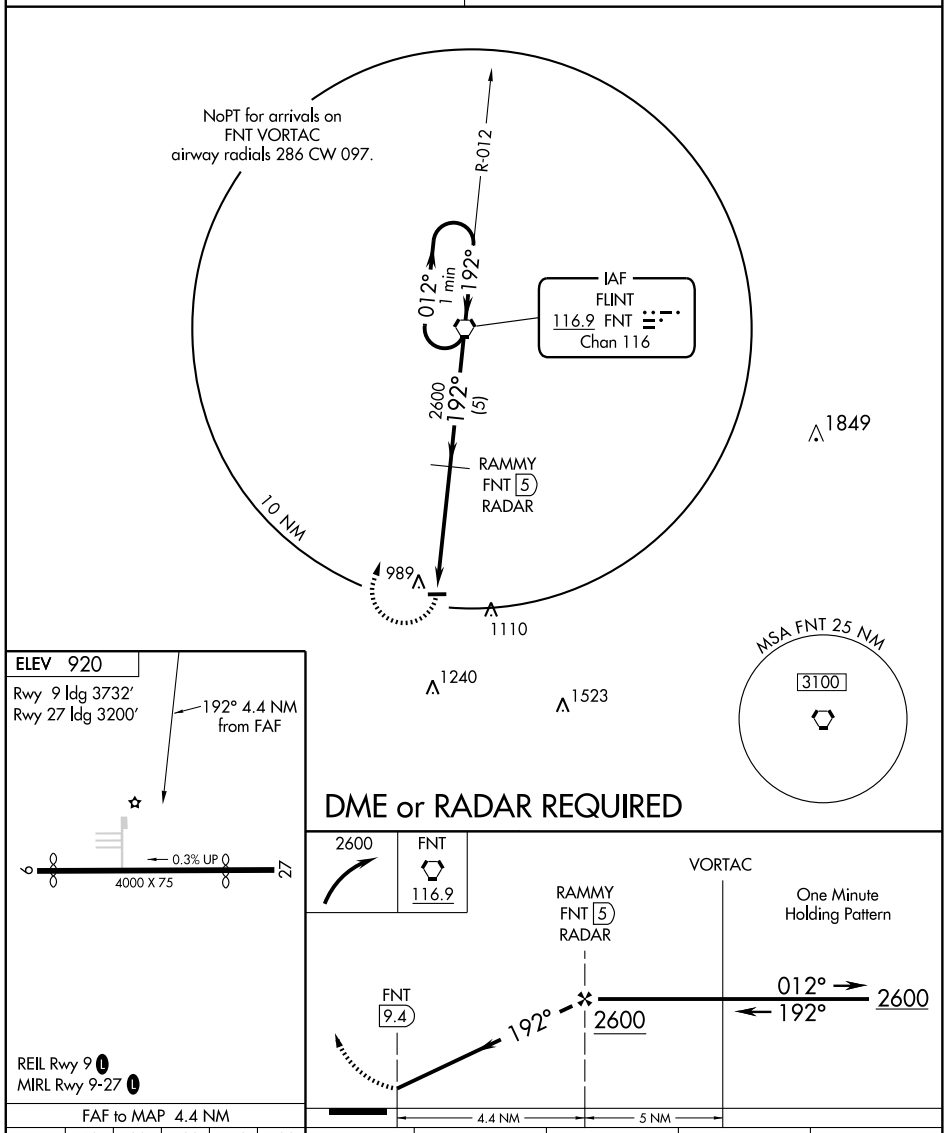
VOR-A
LINDEN/ PRICE'S (9G2)

NA

Use Flint altimeter setting.

MISSED APPROACH: Climbing right turn to 2600 direct FNT VORTAC and hold.

FLINT APP CON ★	UNICOM
118.8 257.9	123.0 (CTAF) L



FAF to MAP 4.4 NM					
Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

CATEGORY	A	B	C	D
CIRCLING	1460-1 540 (600-1)		NA	

NDB LDM	APP CRS	Rwy ldg	5003
341	260°	TDZE	645
		Apt Elev	645

NDB RWY 26

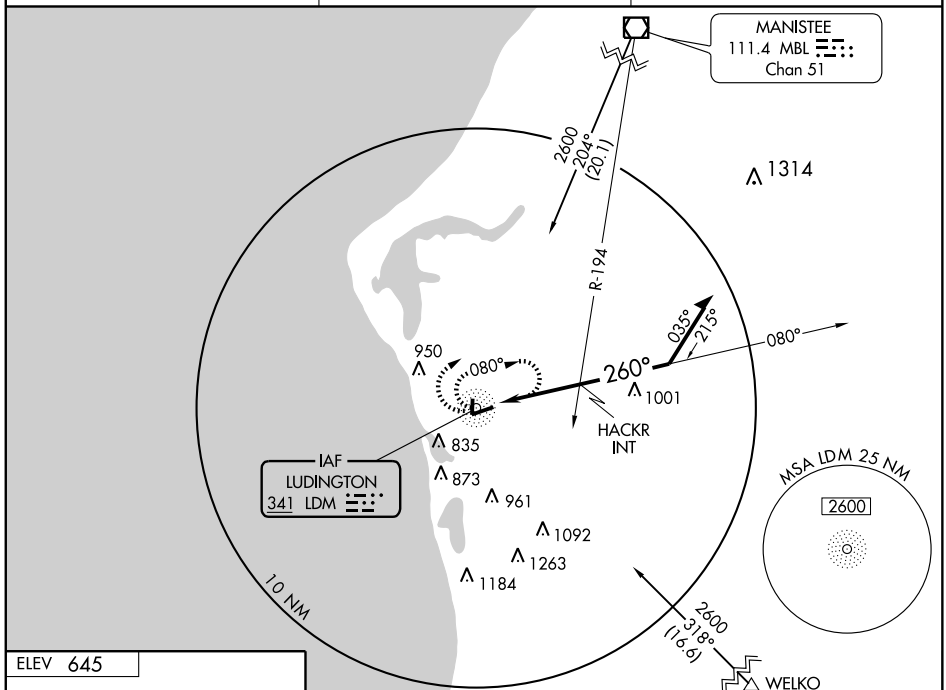
LUDINGTON/MASON COUNTY (LDM)

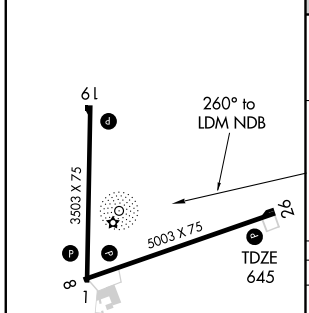
NA

Obtain local altimeter setting on CTAF; when not received, use Muskegon altimeter setting and increase all MDAs 220 feet and all visibilities ¾ of a mile.

MISSED APPROACH: Climbing right turn to 2500 in LDM NDB holding pattern.

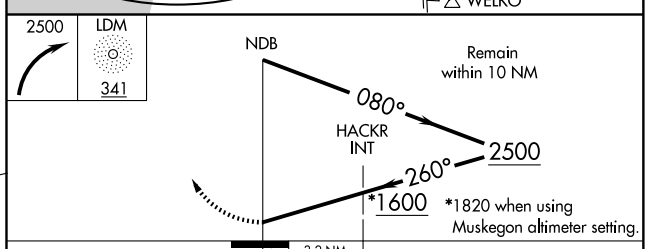
AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	120.85 322.35	123.0 (CTAF) L





REIL Rwy 26 L
MIRL Rwys 8-26 and 1-19 L

Knots	60	90	120	150	180
Min:Sec					



CATEGORY	A	B	C	D
S-26	1600-1¼ 955 (1000-1¼)	1600-1½ 955 (1000-1½)	1600-3 955 (1000-3)	
CIRCLING	1600-1¼ 955 (1000-1¼)	1600-1½ 955 (1000-1½)	1600-3 955 (1000-3)	
HACKR FIX MINIMUMS				
S-26	1160-1 515 (600-1)		1160-1½ 515 (600-1½)	1160-1¾ 515 (600-1¾)
CIRCLING	1160-1 515 (600-1)		1200-1½ 555 (600-1½)	1300-2 655 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

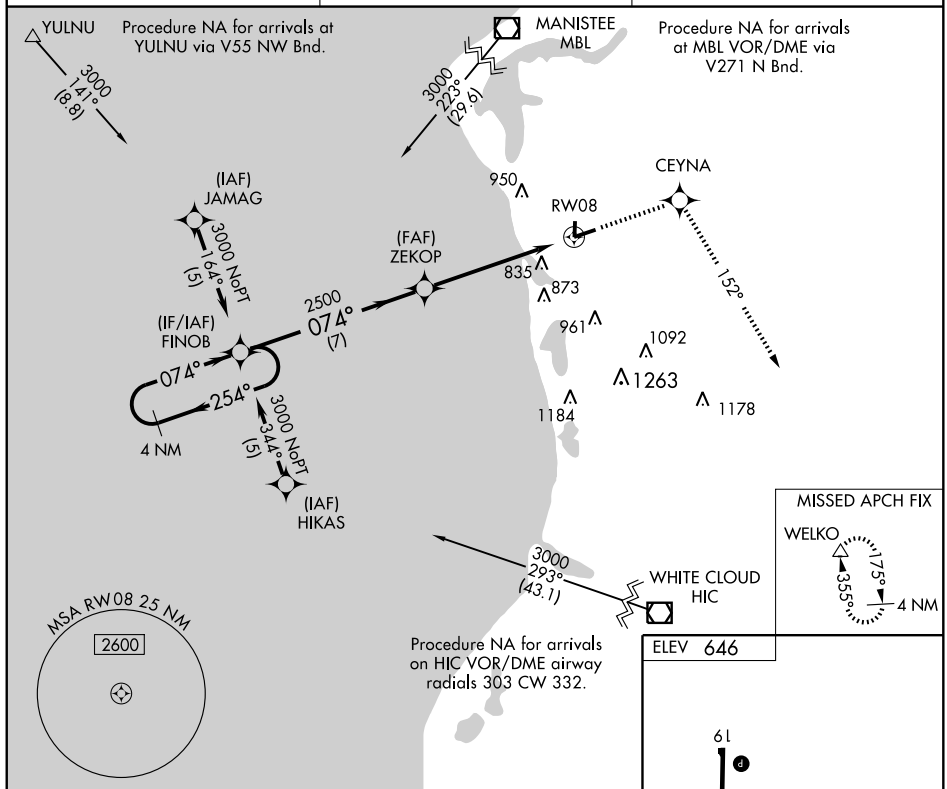
APP CRS	Rwy ldg	5003
074°	TDZE	643
	Apt Elev	646

RNAV (GPS) RWY 8
LUDINGTON/MASON COUNTY (LDM)

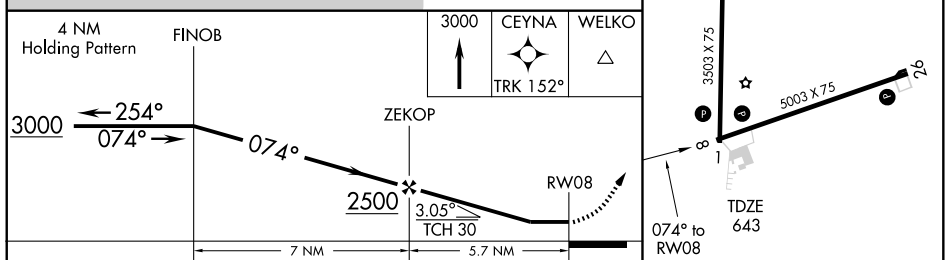
DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon County altimeter setting and increase all MDAs 120 feet, increase LNAV and circling visibility Cat C/D ½ mile.

MISSED APPROACH: Climb to 3000 direct CEYNA and via 152° track to WELKO and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	120.85 322.35	123.0 (CTAF) L



ELEV 646



CATEGORY	A	B	C	D
LNAV MDA	1140-1	497 (500-1)	1140-1¼ 497 (500-1¼)	1140-1½ 497 (500-1½)
CIRCLING	1160-1	514 (600-1)	1200-1½ 554 (600-1½)	1300-2 654 (700-2)

REIL Rwy 26 L
MIRL Rwys 8-26 and 1-19 L

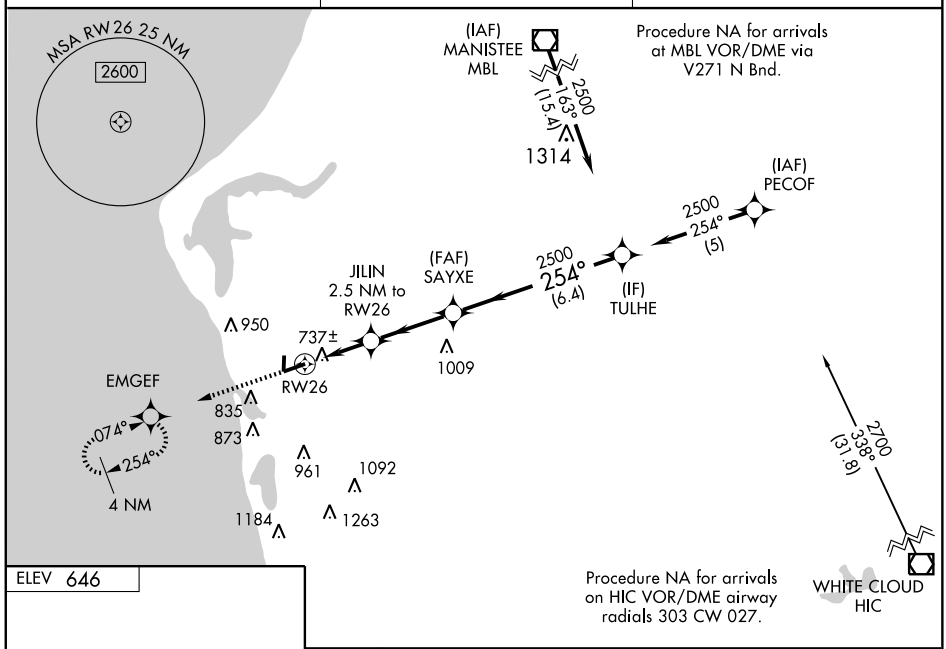
WAAS CH 49206 W26A	APP CRS 254°	Rwy ldg 5003 TDZE 646 Apt Elev 646

RNAV (GPS) RWY 26
LUDINGTON/ MASON COUNTY (LDM)

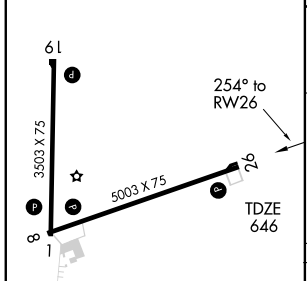
Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, procedure NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Muskegon County altimeter setting and increase DAs and MDAs 120 feet and increase LPV visibility ¼ mile all Cats, increase LNAV/VNAV visibility ½ mile all Cats, increase LNAV Cat C/D visibility ¼ mile, increase circling Cat C/D visibility ½ mile.

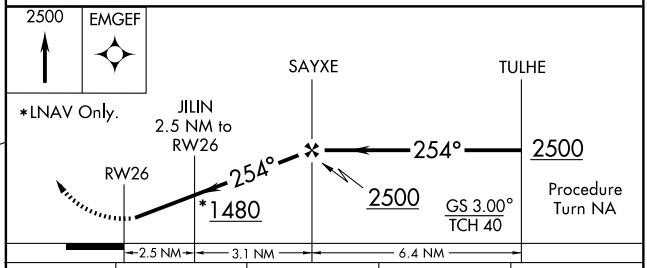
MISSED APPROACH: Climb to 2500 direct EMGEF and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	120.85 322.35	123.0 (CTAF) L



ELEV 646





CATEGORY	A	B	C	D
LPV DA	975-1¼ 329 (400-1¼)			
LNAV/ VNAV DA	1020-1¼ 374 (400-1¼)			
LNAV MDA	1000-1 354 (400-1)			1000-1¼ 354 (400-1¼)
CIRCLING	1160-1 514 (600-1)		1200-1½ 554 (600-1½)	1300-2 654 (700-2)

REIL Rwy 26 L
MIRL Rwys 8-26 and 1-19 L

EC-1. 14 JAN 2010 to 11 FEB 2010

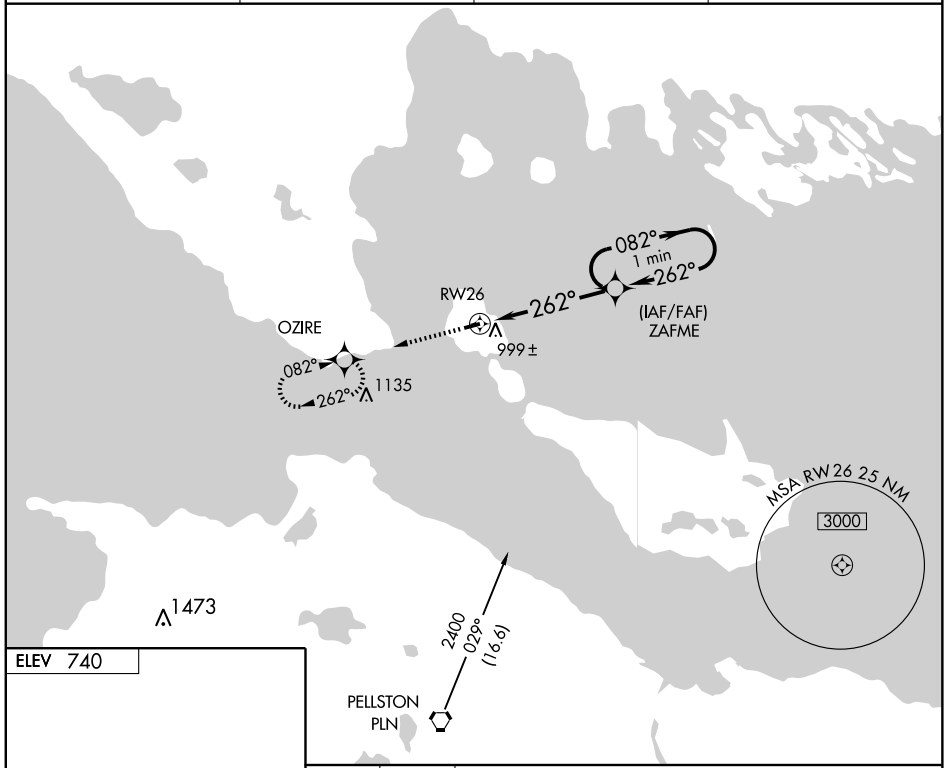
APP CRS		
262°	Rwy ldg	3500
	TDZE	740
	Apt Elev	740

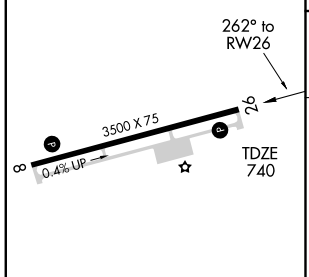
GPS RWY 26
MACKINAC ISLAND (MCD)

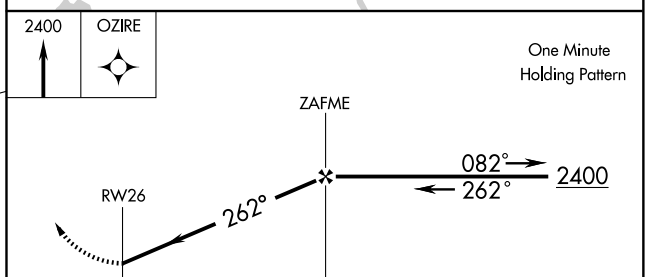
NA

MISSED APPROACH: Climb to 2400 direct OZIRE WP and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.275	134.6 354.05	122.7 (CTAF)	122.8 L







CATEGORY	A	B	C	D
S-26	1260-1	520 (600-1)	1260-1½ 520 (600-1½)	NA
CIRCLING	1320-1	580 (600-1)	1320-1½ 580 (600-1½)	NA

MIRL Rwy 8-26 L
REIL Rwys 8 and 26 L

VORTAC PLN	APP CRS	Rwy ldg	N/A
111.8	012°	TDZE	N/A
Chan 55		Apt Elev	740

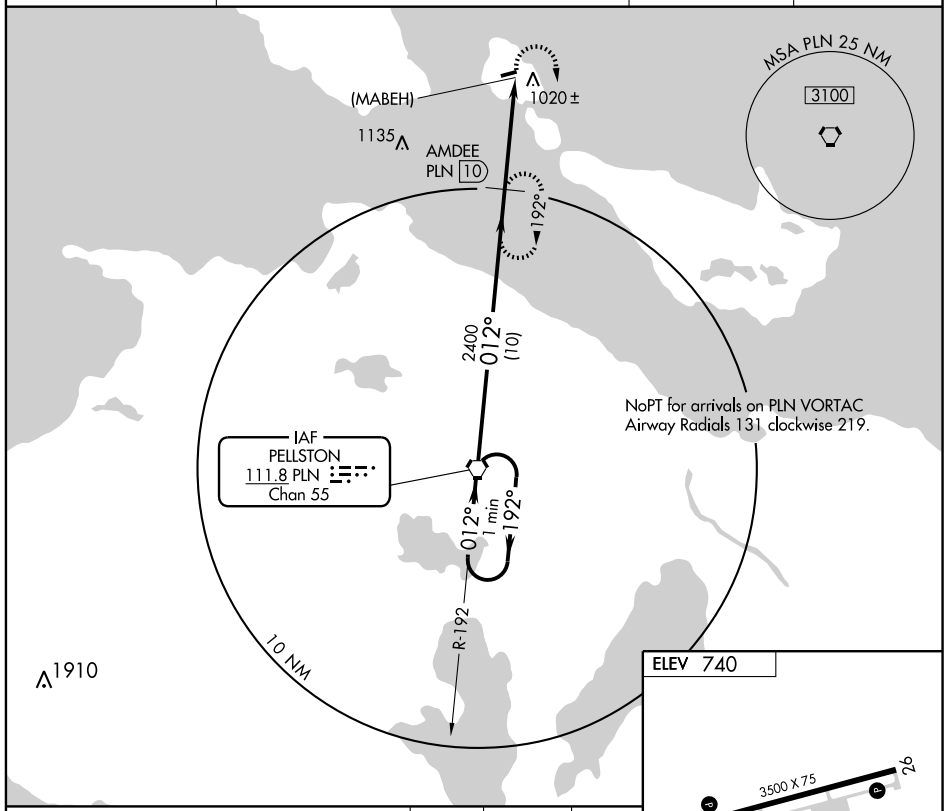
VOR/DME or GPS-A
MACKINAC ISLAND (MCD)

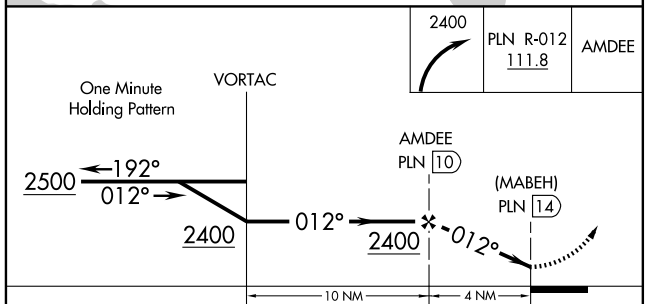
Use Mackinac Island altimeter setting. If not available, use Pellston altimeter setting and increase all MDAs 80 feet; if neither are available, procedure not authorized.

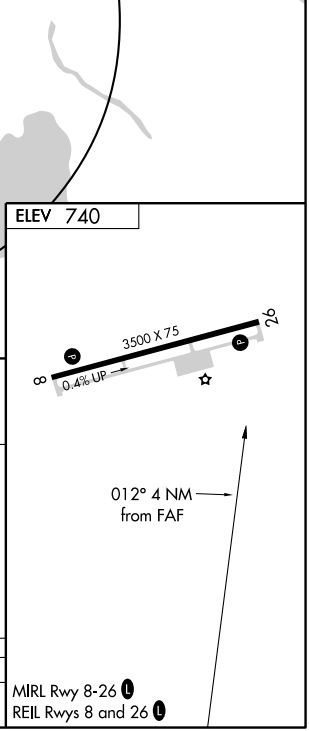
NA

MISSED APPROACH: Climbing right turn to 2400 via PLN R-012 to AMDEE 10 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.275	134.6 354.05	122.7 (CTAF)	122.8 L







CATEGORY	A	B	C	D
CIRCLING	1320-1 581 (600-1)		1320-1½ 581 (600-1½)	NA

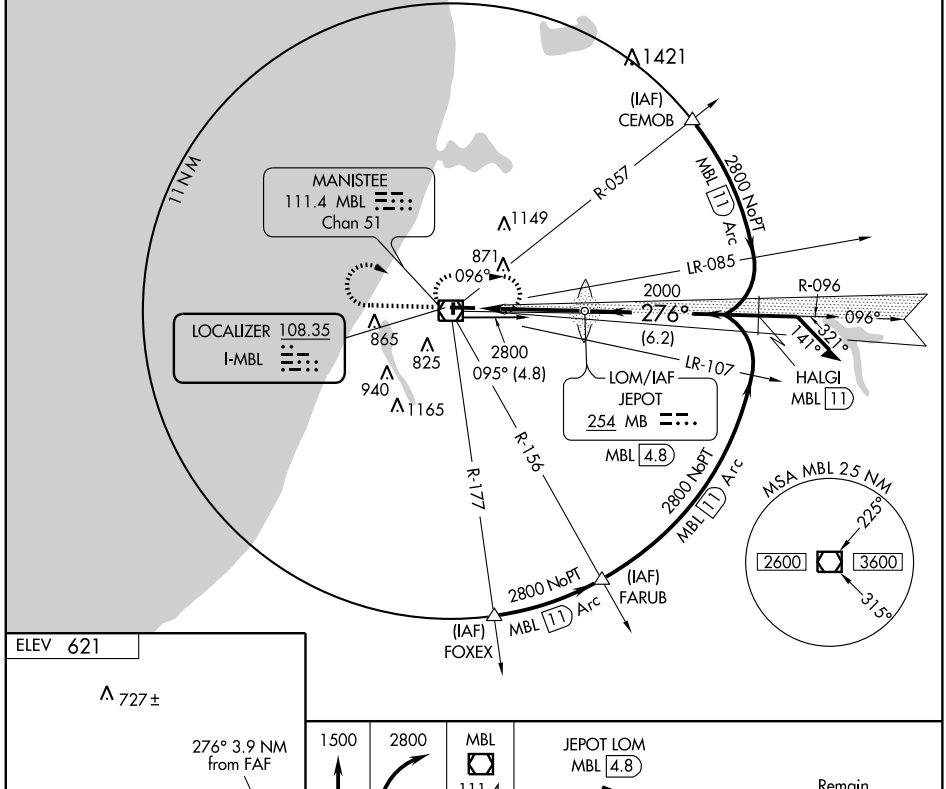
LOC I-MBL	APP CRS	Rwy ldg	5500
108.35	276°	TDZE	621
		Apt Elev	621

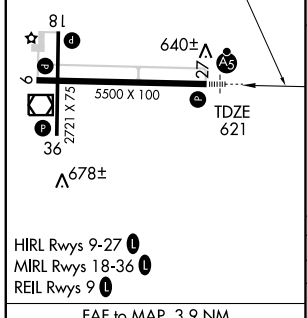
ILS RWY 27
MANISTEE COUNTY-BLACKER (MBL)

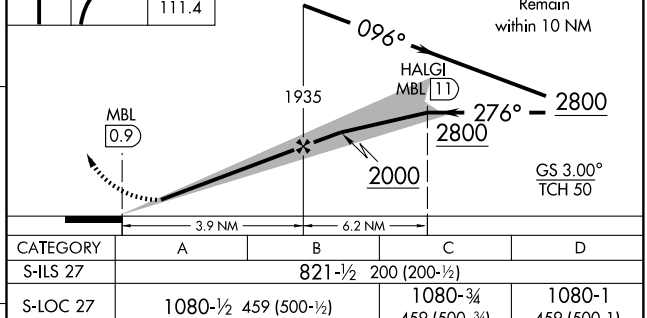
MALSR

MISSED APPROACH: Climb to 1500 then climbing right turn to 2800 direct MBL VOR/DME and hold.

AWOS-3	LANSING RADIO	UNICOM
111.4	122.1R	122.8 (CTAF) L







HIRL Rwys 9-27 L
MIRL Rwys 18-36 L
REIL Rwys 9 L

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

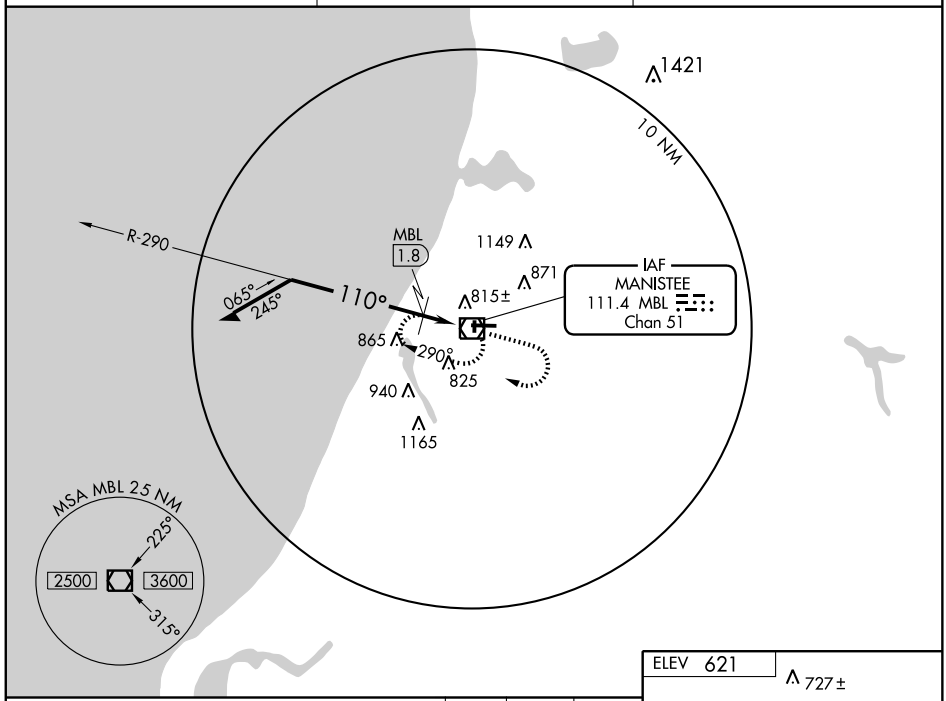
CATEGORY	A	B	C	D
S-ILS 27	821-½ 200 (200-½)			
S-LOC 27	1080-½ 459 (500-½)		1080-¾ 459 (500-¾)	1080-1 459 (500-1)
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1180-1½ 559 (600-1½)	1300-2¼ 679 (700-2¼)

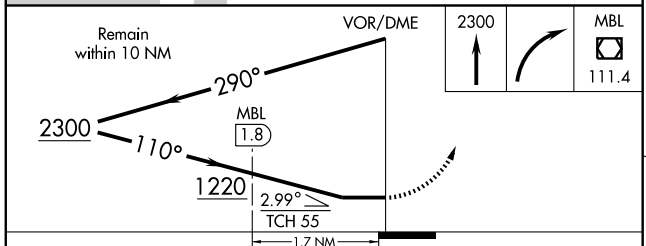
VOR/DME MBL 111.4 Chan 51	APP CRS 110°	Rwy ldg 5500 TDZE 621 Apt Elev 621

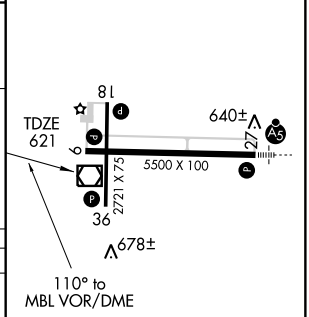
VOR RWY 9
MANISTEE COUNTY-BLACKER (MBL)

MISSED APPROACH: Climb to 2300, then right turn direct MBL VOR/DME and hold.

AWOS-3	LANSING RADIO	UNICOM
111.4	122.1 R	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-9	1220-1 599 (600-1)		1220-1½ 599 (600-1½)	1220-1¾ 599 (600-1¾)
CIRCLING	1220-1 599 (600-1)		1220-1½ 599 (600-1½)	1300-2¼ 679 (700-2¼)
DME MINIMUMS				
S-9	1080-1 459 (500-1)		1080-1¼ 459 (500-1¼)	1080-1½ 459 (500-1½)
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1180-1½ 559 (600-1½)	1300-2¼ 679 (700-2¼)

HIRL Rwys 9-27 L
MIRL Rwys 18-36 L
REIL Rwys 9 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBL	APP CRS	Rwy ldg 5500
111.4	271°	TDZE 621
Chan 51		Apt Elev 621

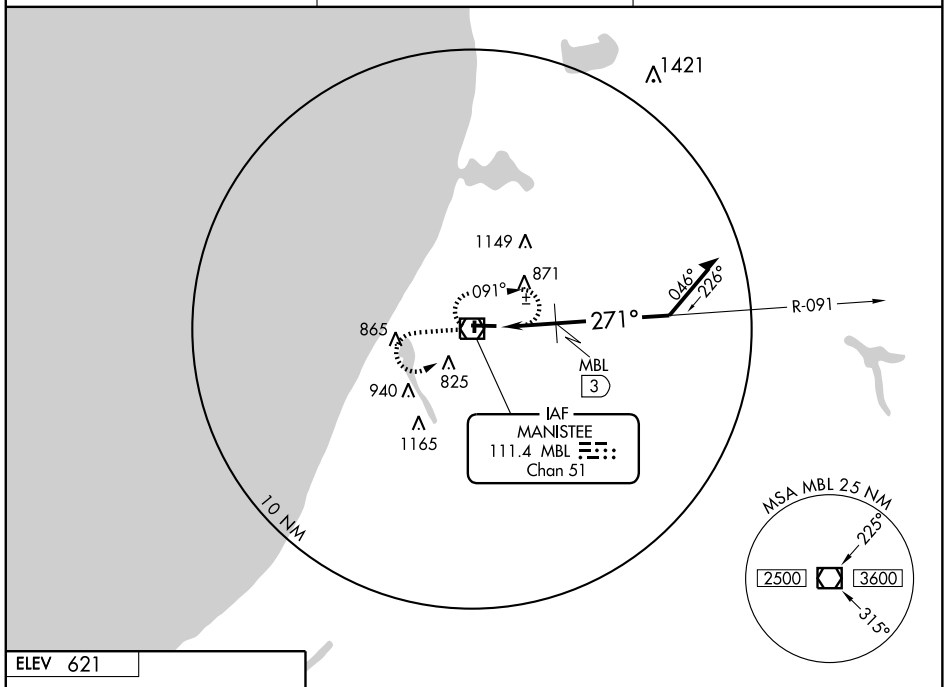
VOR RWY 27

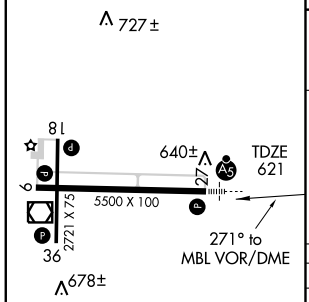
MANISTEE COUNTY-BLACKER (MBL)

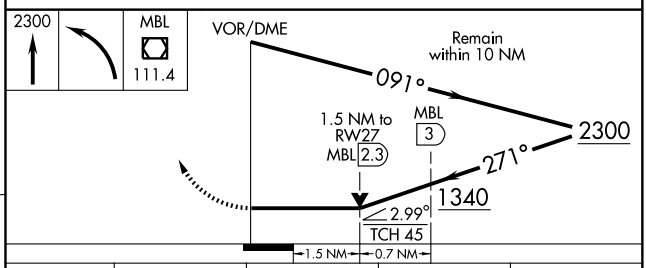
MALSR

MISSED APPROACH: Climb to 2300, then left turn direct MBL VOR/DME and hold.

AWOS-3	LANSING RADIO	UNICOM
111.4	122.1R	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-27	1340-½ 719 (800-½)		1340-1½ 719 (800-1½)	1340-1¾ 719 (800-1¾)
CIRCLING	1340-1 719 (800-1)		1340-2 719 (800-2)	1340-2¼ 719 (800-2¼)
DME MINIMUMS				
S-27	1140-½ 519 (600-½)		1140-1 519 (600-1)	1140-1¼ 519 (600-1¼)
CIRCLING	1140-1 519 (600-1)	1160-1 539 (600-1)	1180-1½ 559 (600-1½)	1300-2¼ 679 (700-2¼)

HIRL Rwys 9-27 L
MIRL Rwys 18-36 L
REIL Rwys 9 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ISQ 110.4 Chan 41	APP CRS 280°	Rwy ldg 5001 TDZE 684 Apt Elev 685

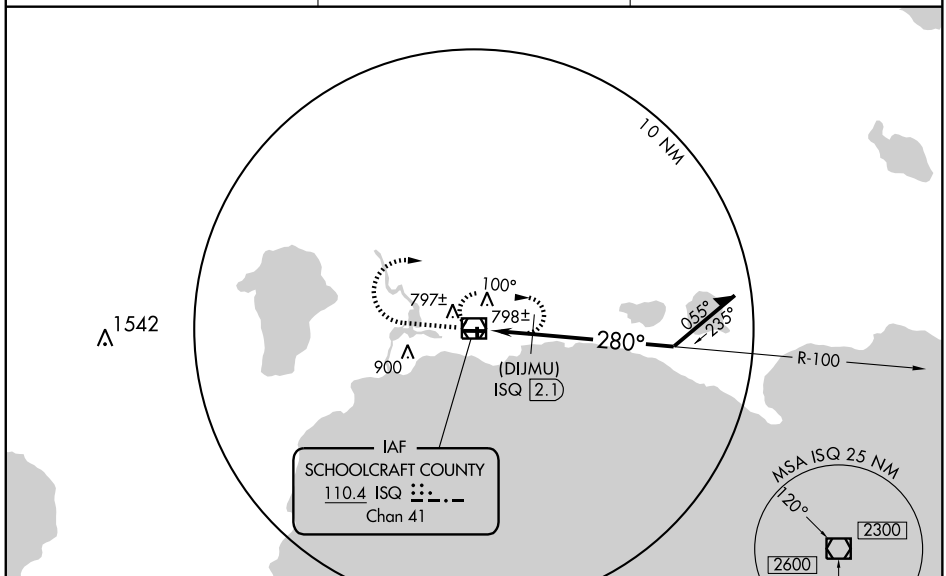
VOR or GPS RWY 28

MANISTIQUE/ SCHOOLCRAFT COUNTY (ISQ)

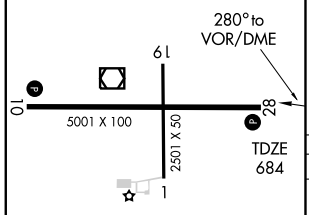
NA Obtain local altimeter setting on CTAF, when not received, use Escanaba altimeter setting and increase all MDA's 100 feet, and visibility Cats. C and D ¼ mile.

MISSED APPROACH: Climb to 2300, then right turn direct ISQ VOR/DME and hold.

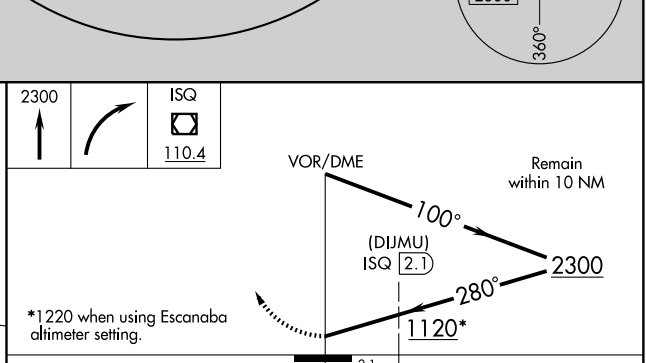
AWOS-3	GREEN BAY RADIO	UNICOM
110.4	122.25	122.8 (CTAF) L



ELEV 685



REIL Rwy 28 L
MIRL Rwy 10-28 L



*1220 when using Escanaba altimeter setting.

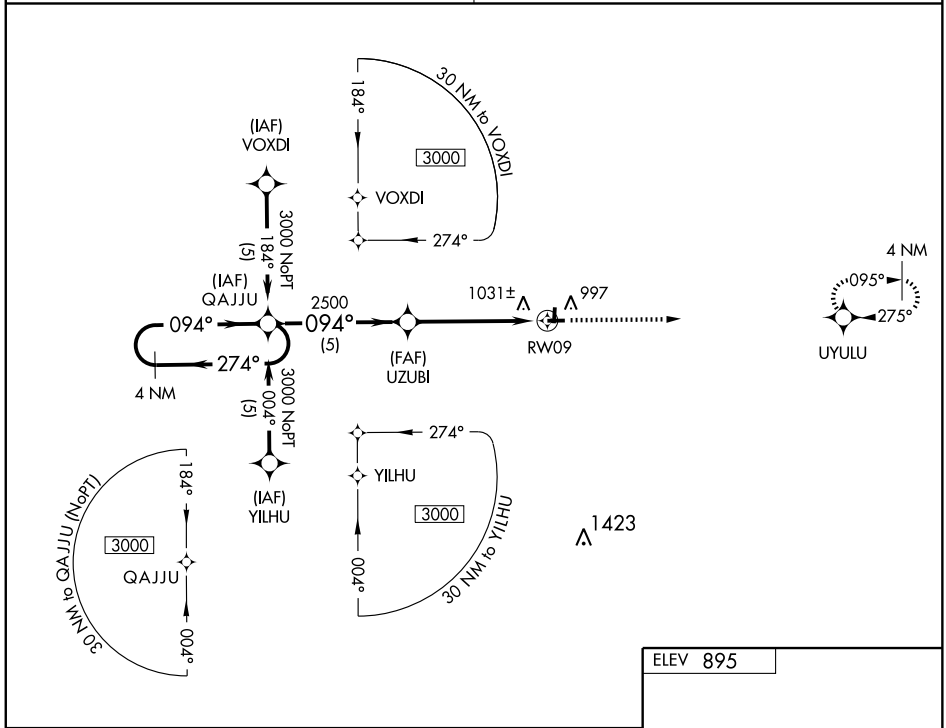
CATEGORY	A	B	C	D
S-28	1120 - 1 436 (500-1)		1120 - 1¼ 436 (500-1¼)	1120 - 1½ 436 (500-1½)
CIRCLING	1120 - 1 435 (500-1)	1140 - 1 455 (500-1)	1140 - 1½ 455 (500-1½)	1260 - 2 575 (600-2)
DME MINIMUMS				
S-28	1060 - 1 376 (400-1)			1060 - 1¼ 376 (400-1¼)
CIRCLING	1120 - 1 435 (500-1)	1140 - 1 455 (500-1)	1140 - 1½ 455 (500-1½)	1260 - 2 575 (600-2)

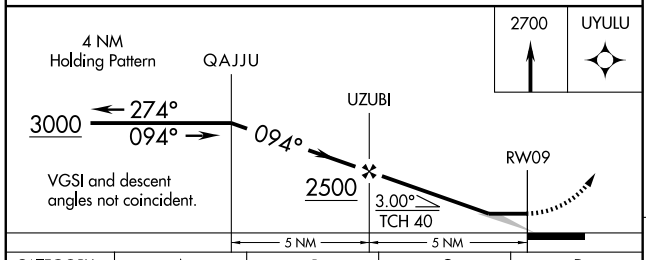
EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3796
094°	TDZE	881
	Apt Elev	895

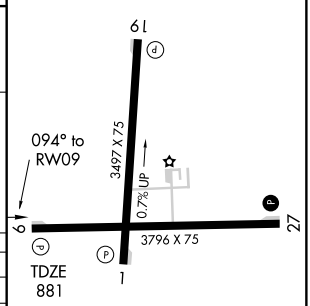
RNAV (GPS) RWY 9
MARLETTE (77G)

NA Use Flint altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 2700 direct UYULU WP and hold.
CLEVELAND CENTER **127.7 307.8**	UNICOM **122.8** (CTAF) L





CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV DA	NA			
LNAV MDA	1440-1 559 (600-1)		1440-1½ 559 (600-1½)	1440-1¾ 559 (600-1¾)
CIRCLING	1440-1 545 (600-1)		1440-1½ 545 (600-1½)	1460-2 565 (600-2)



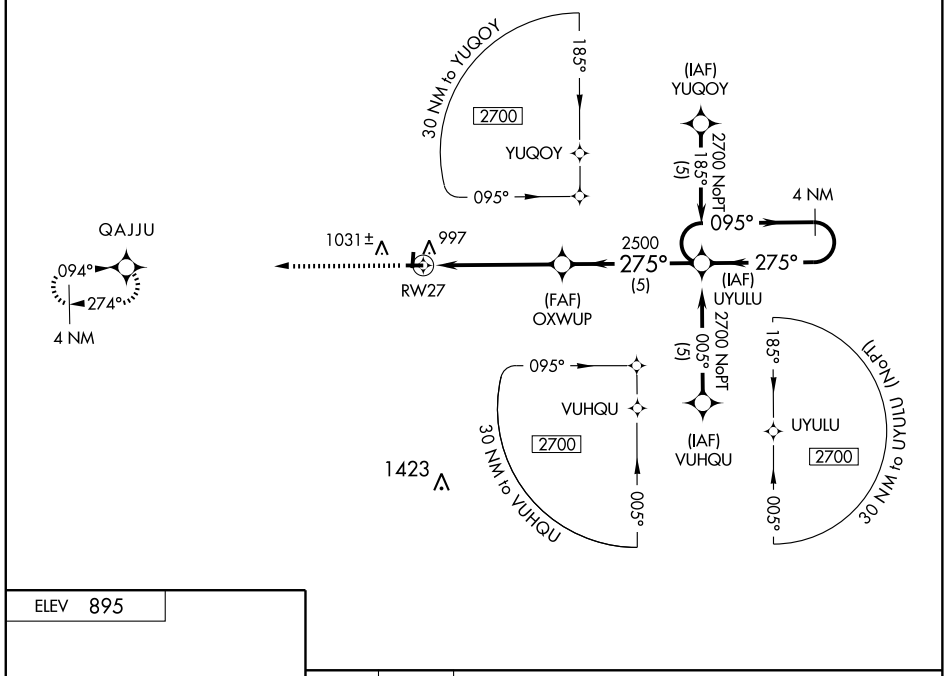
REIL Rwy 27 L
MIRL Rwys 1-19 and 9-27 L

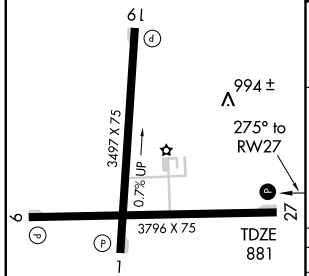
EC-1. 14 JAN 2010 to 11 FEB 2010

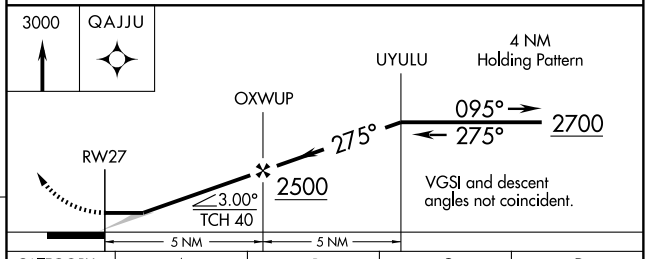
APP CRS	Rwy ldg	3796
275°	TDZE	881
	Apt Elev	895

RNAV (GPS) RWY 27
MARLETTE (77G)

NA Use Flint altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3000 direct QAJJU WP and hold.
CLEVELAND CENTER **127.7 307.8**	UNICOM **122.8** (CTAF) L







CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV DA	NA			
LNAV MDA	1360-1 479 (500-1)		1360-1¼ 479 (500-1¼)	1360-1½ 479 (500-1½)
CIRCLING	1440-1 545 (600-1)		1440-1½ 545 (600-1½)	1460-2 565 (600-2)

REIL Rwy 27 L
MIRL Rwys 1-19 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC ECK 114.0 Chan 87	APP CRS 289°	Rwy ldg N/A TDZE N/A Apt Elev 895

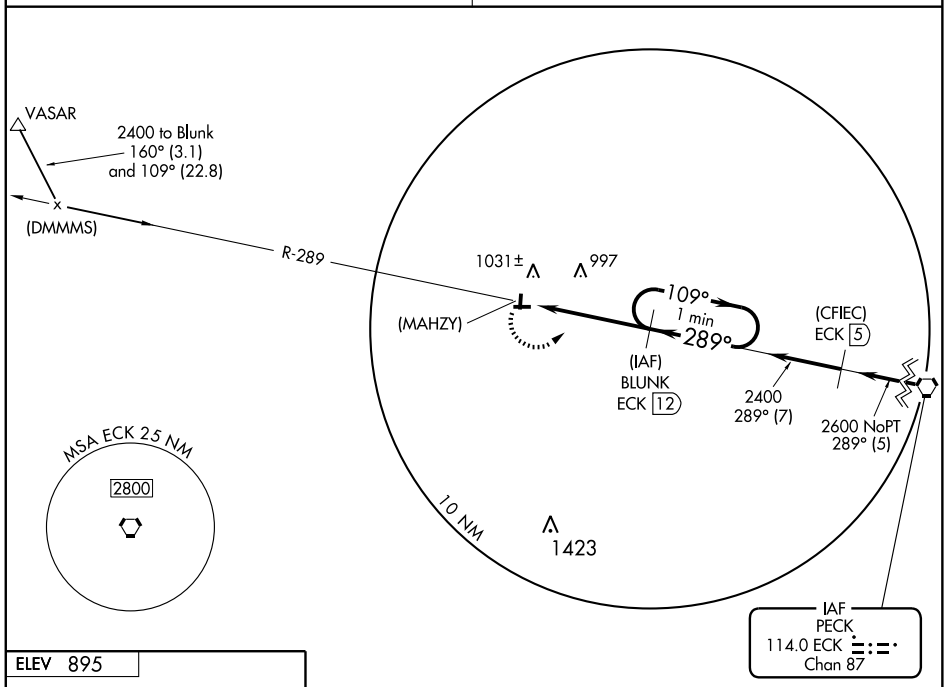
VOR/DME or GPS-A

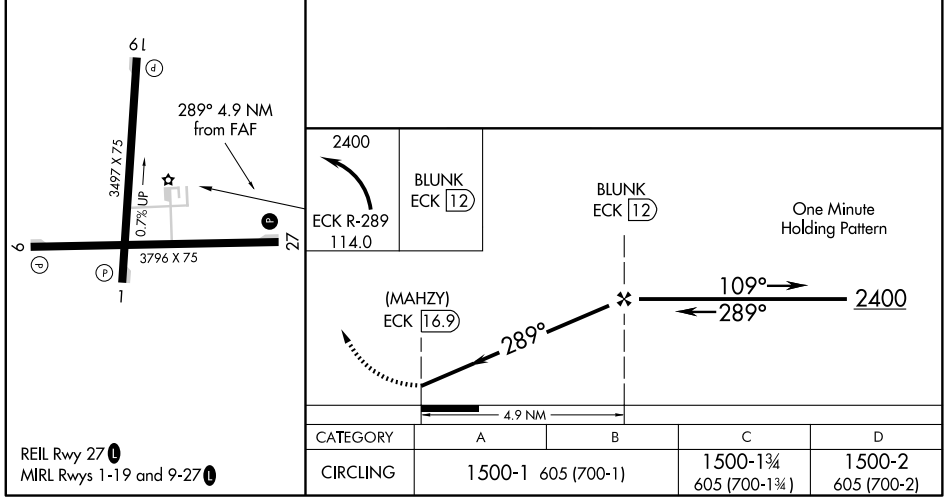
MARLETTE (77G)

NA Use Flint altimeter setting.

MISSED APPROACH: Climbing left turn to 2400 via ECK R-289 to BLUNK 12 DME and hold.

CLEVELAND CENTER	UNICOM
127.7 307.8	122.8 (CTAF) L





REIL Rwy 27 L
MIRL Rwys 1-19 and 9-27 L

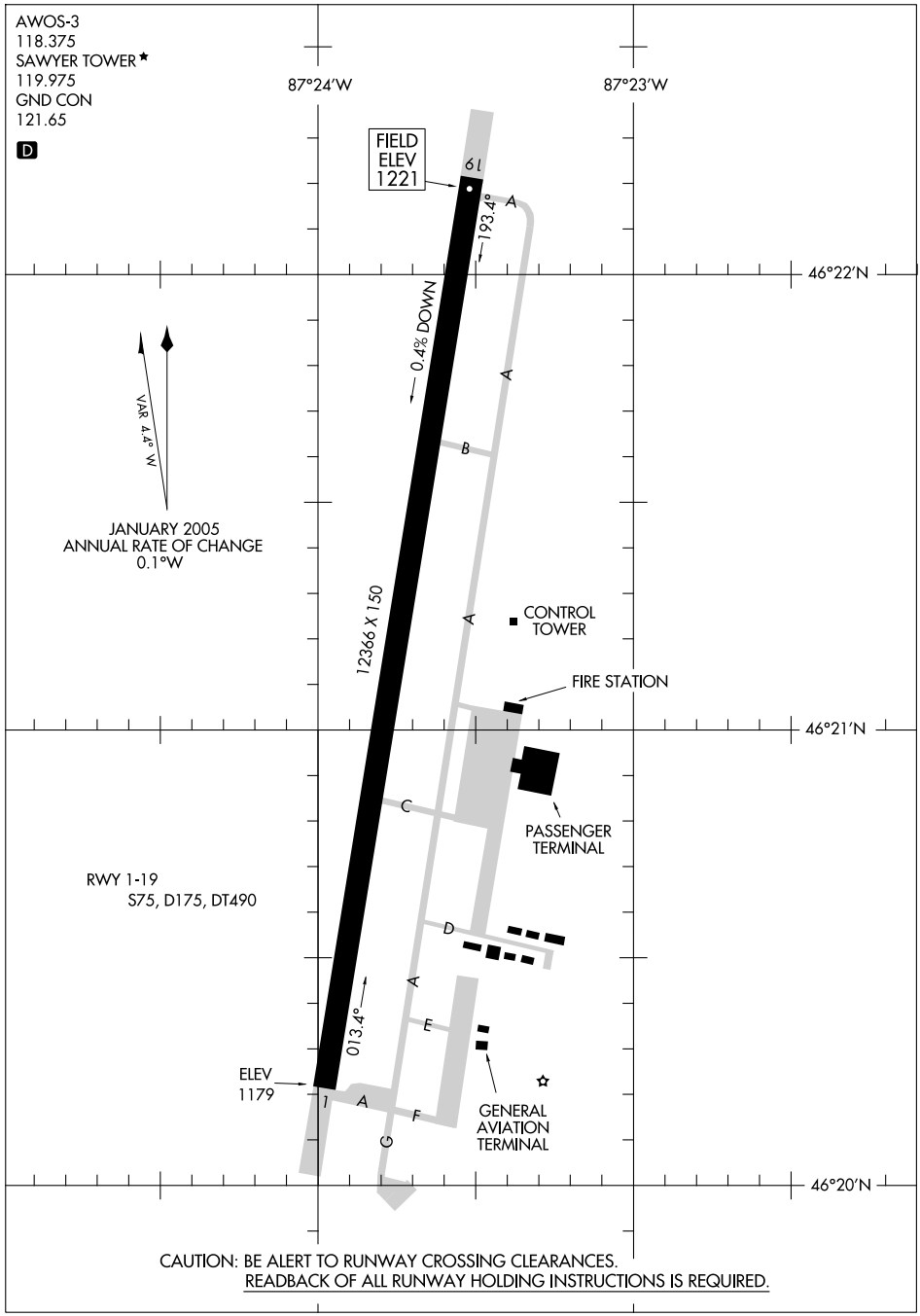
CATEGORY	A	B	C	D
CIRCLING	1500-1 605 (700-1)		1500-1¾ 605 (700-1¾)	1500-2 605 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-773 (FAA)

MARQUETTE/ SAWYER INTL (SAW)
MARQUETTE, MICHIGAN



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

EC-1, 14 JAN 2010 to 11 FEB 2010

LOC I-SOU	APP CRS	Rwy ldg	12366
110.1	013°	TDZE	1180
		Apt Elev	1221

ILS RWY 1

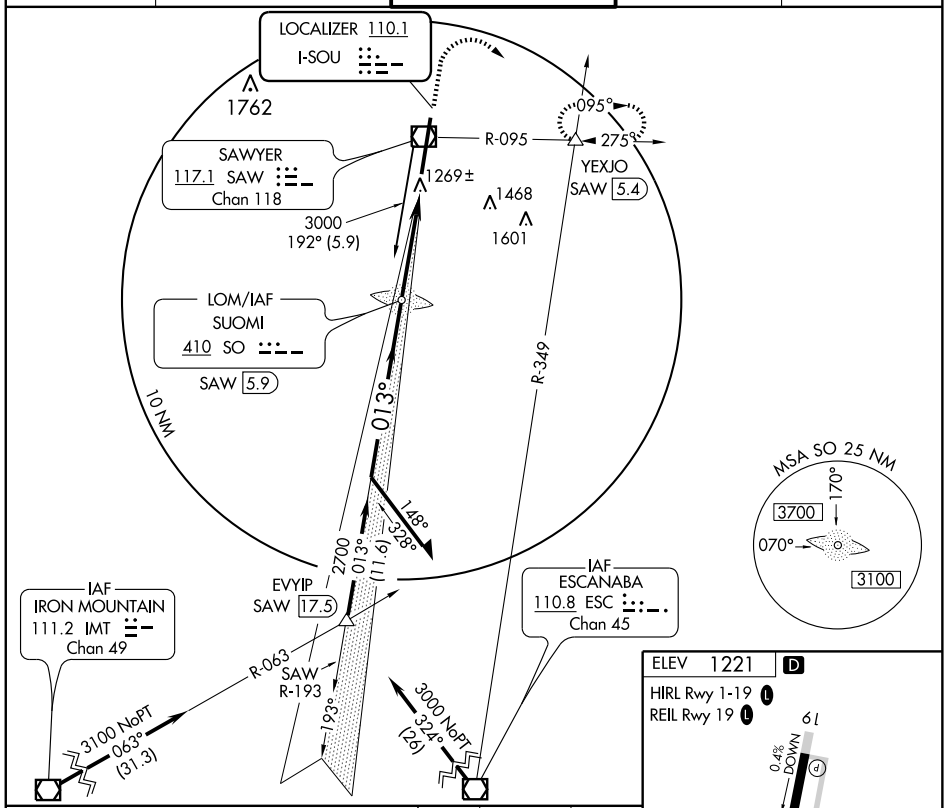
MARQUETTE/ SAWYER INTL (SAW)

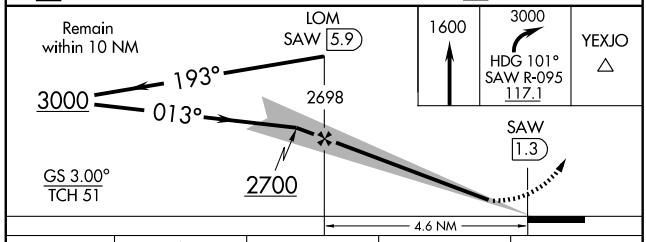
For inoperative MALSR increase S-LOC 1 CAT D visibility to 1.

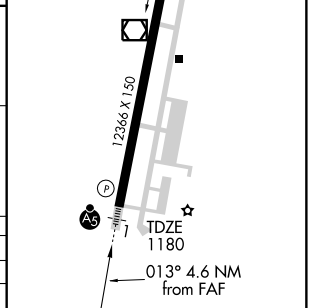
MALSR

MISSED APPROACH: Climb to 1600, then climbing right turn to 3000 via heading 101° and SAW R-095 to YEXJO Int and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







CATEGORY	A	B	C	D
S-ILS 1	1380-½ 200 (200-½)			
S-LOC 1	1520-½ 340 (300-½)			1520-¾ 340 (300-¾)
CIRCLING	1720-1 499 (500-1)		1720-1½ 499 (500-1½)	1780-2 559 (600-2)

FAF to MAP 4.6 NM

Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM SO	APP CRS	Rwy ldg	12366
410	013°	TDZE	1180
		Apt Elev	1221

NDB RWY 1

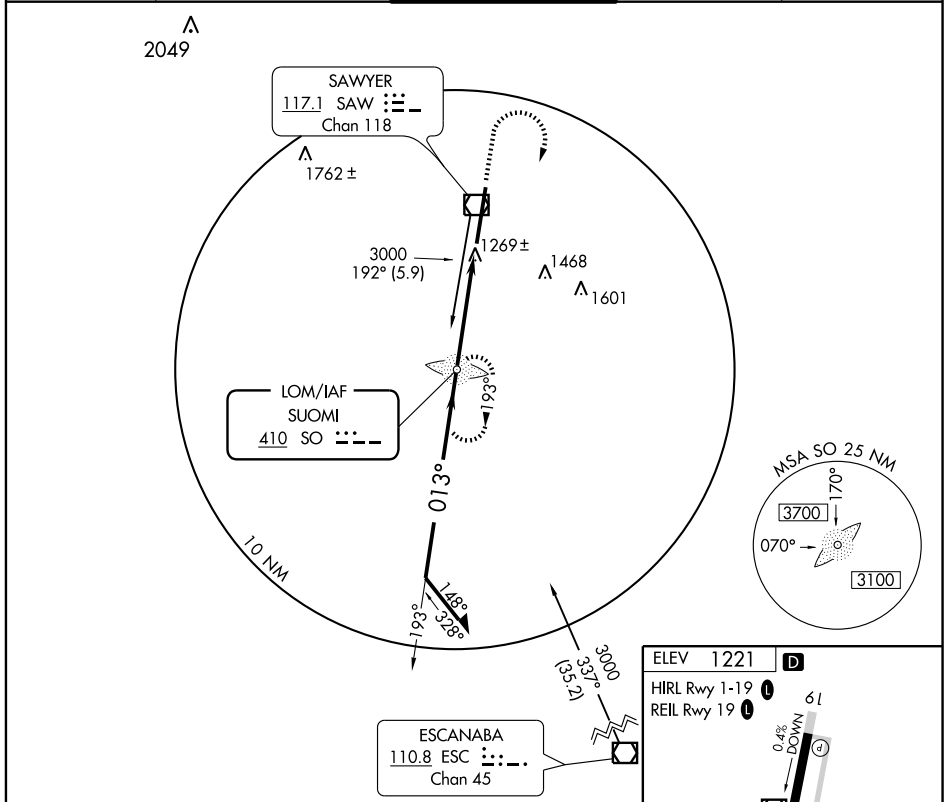
MARQUETTE/ SAWYER INTL (SAW)

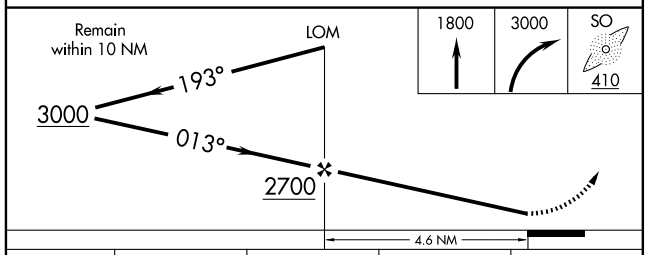
NA — For inoperative MALSR, increase S-1 CAT C visibility to 1.

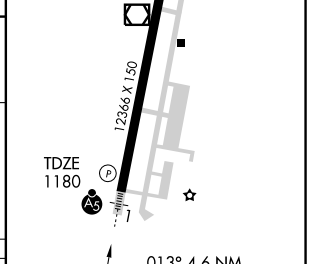
MALSR A5

MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 direct SUOMI LOM and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







CATEGORY	A	B	C	D
S-1	1580-¾ 400 (400-¾)			1580-1 400 (400-1)
CIRCLING	1720-1 499 (500-1)		1720-1½ 499 (500-1½)	1780-2 559 (600-2)

FAF to MAP 4.6 NM

Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	12366
193°	TDZE	1221
	Apt Elev	1221

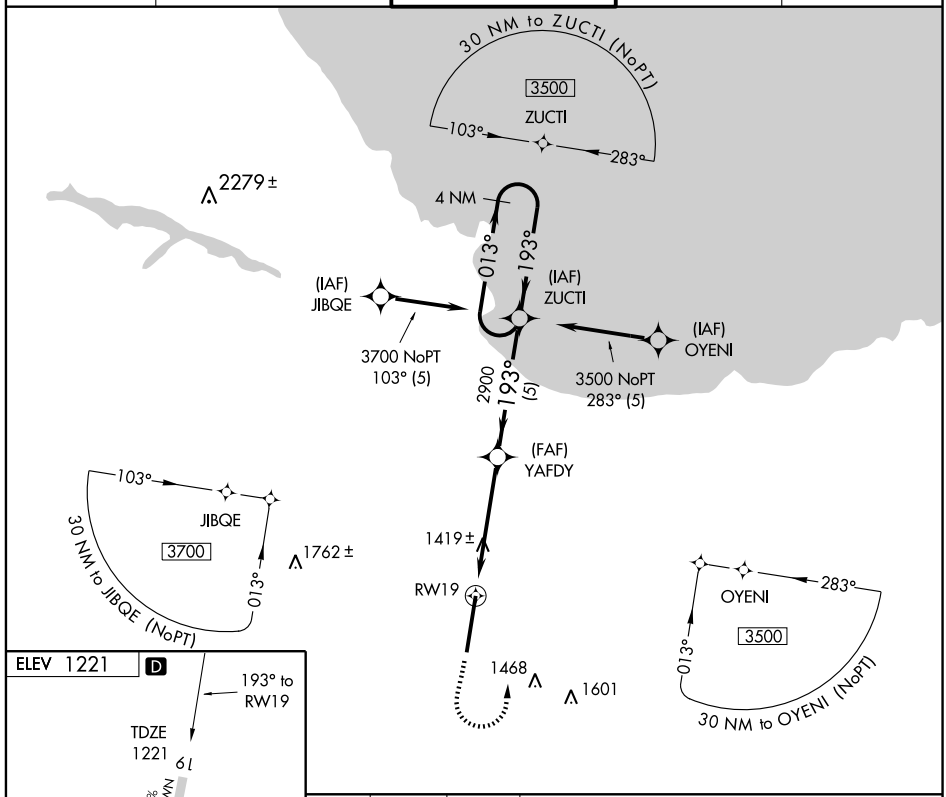
RNAV (GPS) RWY 19
MARQUETTE/ SAWYER INTL (SAW)

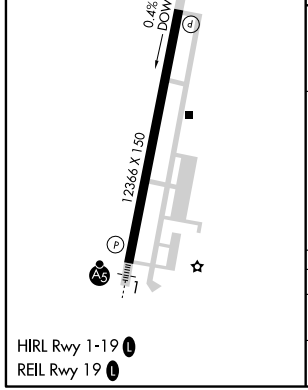
NA

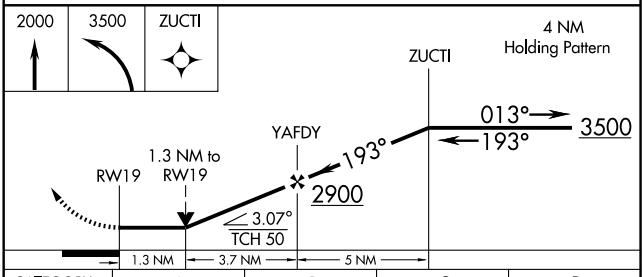
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2000, then climbing left turn to 3500 direct ZUCTI WP and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







CATEGORY	A	B	C	D
LNAV MDA	1680-1 459 (500-1)		1680-1¼ 459 (500-1¼)	1680-1½ 459 (500-1½)
CIRCLING	1720-1 499 (500-1)		1720-1½ 499 (500-1½)	1780-2 559 (600-2)

HIRL Rwy 1-19 L
REIL Rwy 19 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME SAW 117.1 Chan 118	APP CRS 009°	Rwy ldg 12366 TDZE 1180 Apt Elev 1221

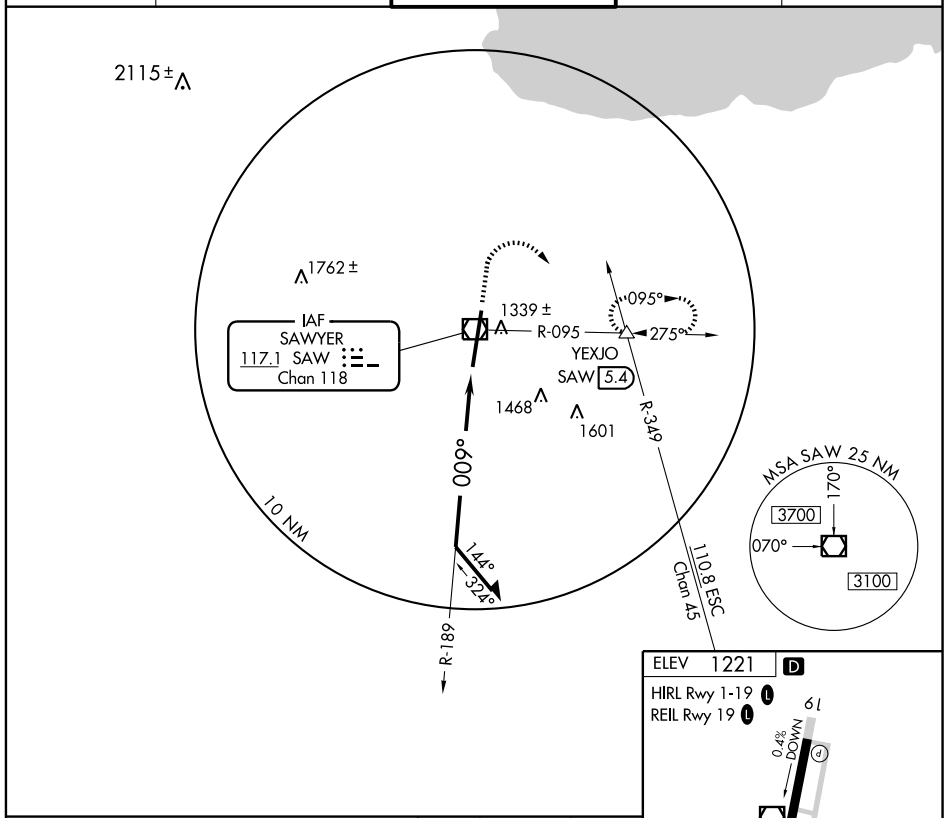
VOR RWY 1

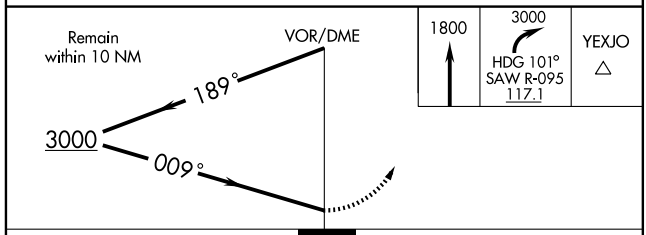
MARQUETTE/ SAWYER INTL (SAW)

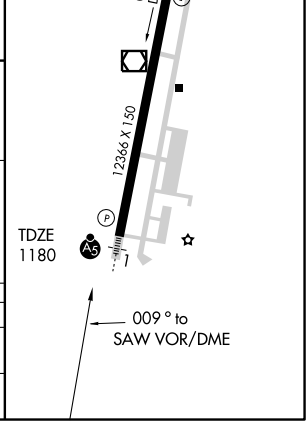
MALSR

MISSED APPROACH: Climb to 1800, then climbing right turn to 3000 via heading 101° and SAW R-095 to YEXJO Int and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







CATEGORY	A	B	C	D
S-1	1640-½ 460 (500-½)		1640-¾ 460 (500-¾)	1640-1 460 (500-1)
CIRCLING	1720-1 499 (500-1)		1720-1½ 499 (500-1½)	1780-2 559 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

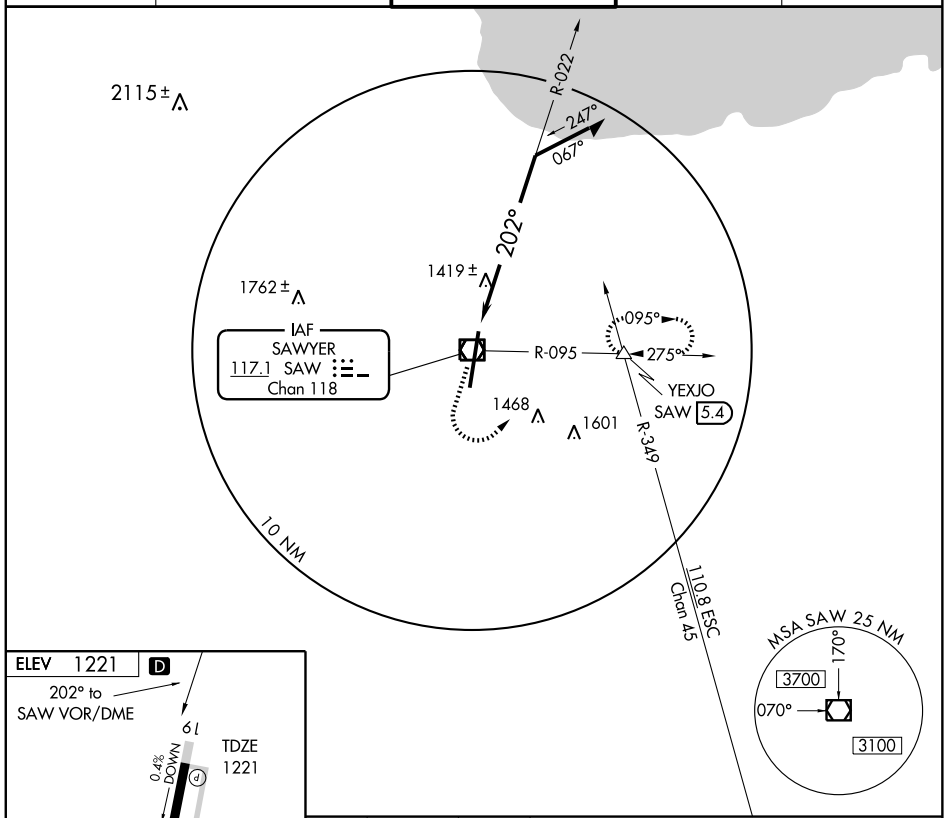
VOR/DME SAW 117.1 Chan 118	APP CRS 202°	Rwy ldg 12366 TDZE 1221 Apt Elev 1221

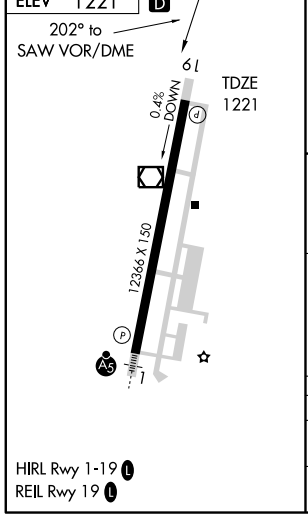
VOR RWY 19

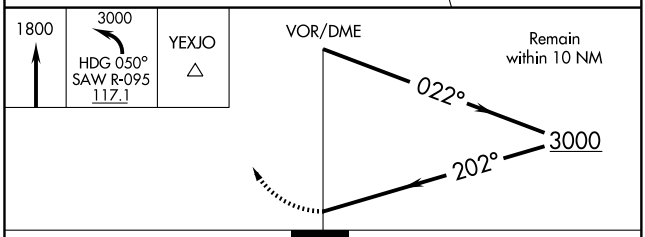
MARQUETTE/ SAWYER INTL (SAW)

MISSED APPROACH: Climb to 1800, then climbing left turn to 3000 via heading 050° and SAW R-095 to YEXJO Int and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







CATEGORY	A	B	C	D
S-19	1720-1 499 (500-1)		1720-1¼ 499 (500-1¼)	1720-1½ 499 (500-1½)
CIRCLING	1720-1 499 (500-1)		1720-1½ 499 (500-1½)	1780-2 559 (600-2)

HIRL Rwy 1-19 L
REIL Rwy 19 L

EC-1. 14 JAN 2010 to 11 FEB 2010

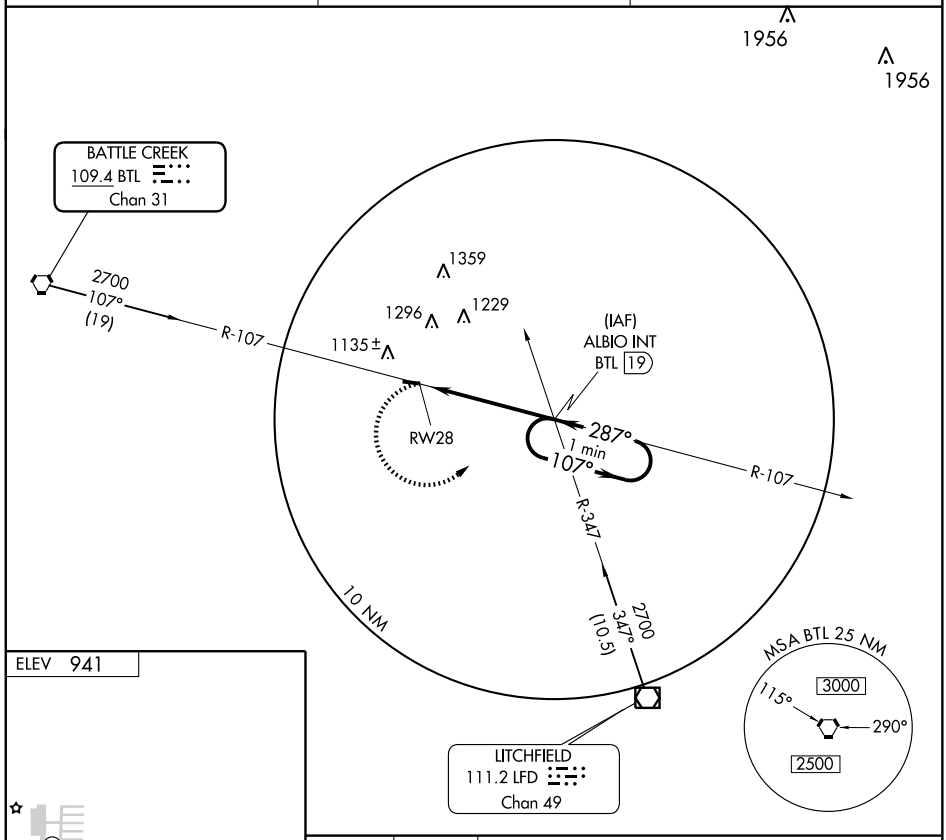
VOR BTL	APP CRS	Rwy ldg	3501
109.4	**287°**	TDZE	**940**
Chan **31**		Apt Elev	**941**

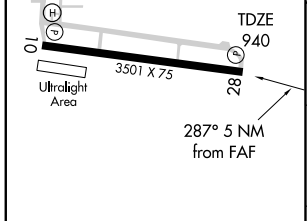
VOR or GPS RWY 28

MARSHALL / BROOKS FIELD (RMY)

MISSED APPROACH: Climbing left turn to 2700 via BTL R-107 to ALBIO Int/BTL 19 DME and hold.

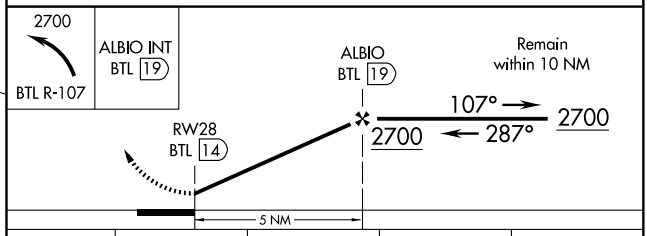
AWOS-3	KALAMAZOO APP CON	UNICOM
120.025	**119.2 340.9**	**122.8** (CTAF) L





MIRL Rwy 10-28 L

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40



CATEGORY	A	B	C	D
S-28	1400-1 460 (500-1)		1400-1¼ 460 (500-1¼)	NA
CIRCLING	1460-1 519 (600-1)		1460-1½ 519 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

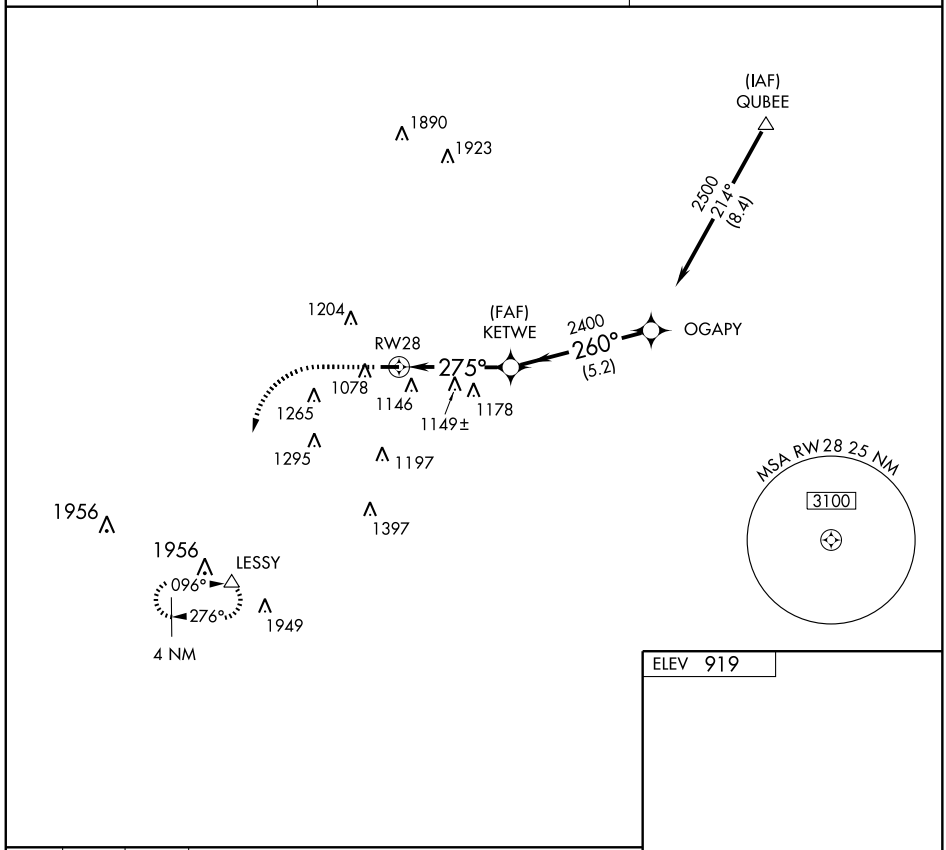
APP CRS	Rwy ldg	4000
275°	TDZE	919
	Apt Elev	919

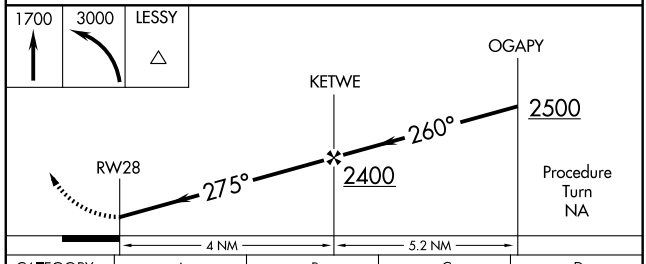
GPS RWY 28
MASON JEWETT FIELD (TEW)

NA

MISSED APPROACH: Climb to 1700 then climbing left turn to 3000 direct LESSY and hold.

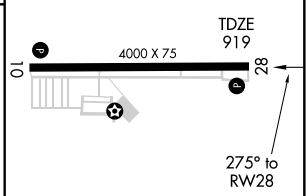
AWOS-3	LANSING APP CON	UNICOM
119.425	118.65 226.40	122.7 (CTAF) L





CATEGORY	A	B	C	D
S-28	1400-1	481 (500-1)	NA	
CIRCLING	1560-1	641 (700-1)	NA	

ELEV 919



MIRL Rwy 10-28 L
REIL Rwys 10 and 28 L

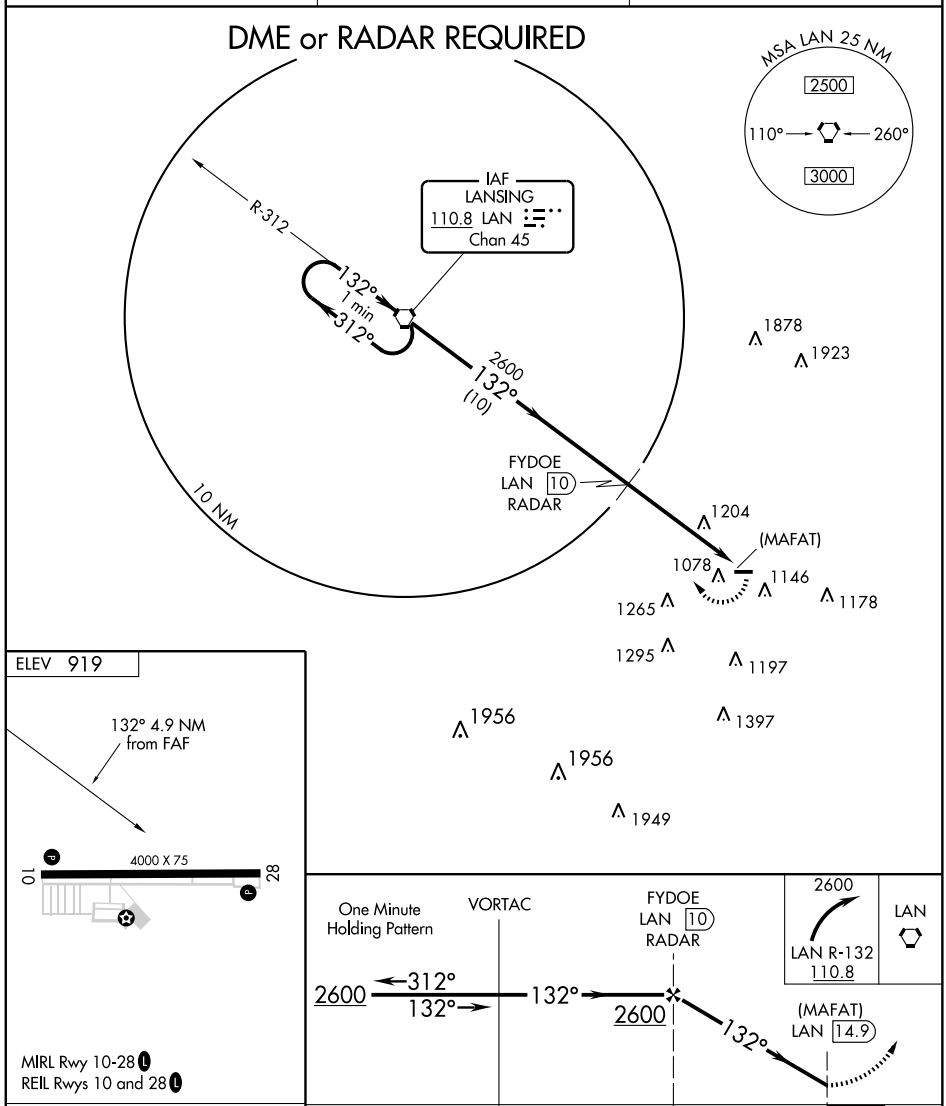
EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC LAN 110.8 Chan 45	APP CRS 132°	Rwy ldg N/A TDZE N/A Apt Elev 919

VOR or GPS-A
MASON JEWETT FIELD (TEW)

MISSED APPROACH: Climbing right turn to 2600 via LAN R-132 to LAN VORTAC and hold.

AWOS-3	LANSING APP CON	UNICOM
119.425	118.65 226.40	122.7 (CTAF) L



FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

CATEGORY	A	B	C	D
CIRCLING	1520-1	601 (700-1)	NA	

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-TNQ	APP CRS	Rwy ldg	6000
108.7	034°	TDZE	624
		Apt Elev	625

ILS or LOC RWY 3

MENOMINEE-MARINETTE TWIN COUNTY (MNM)

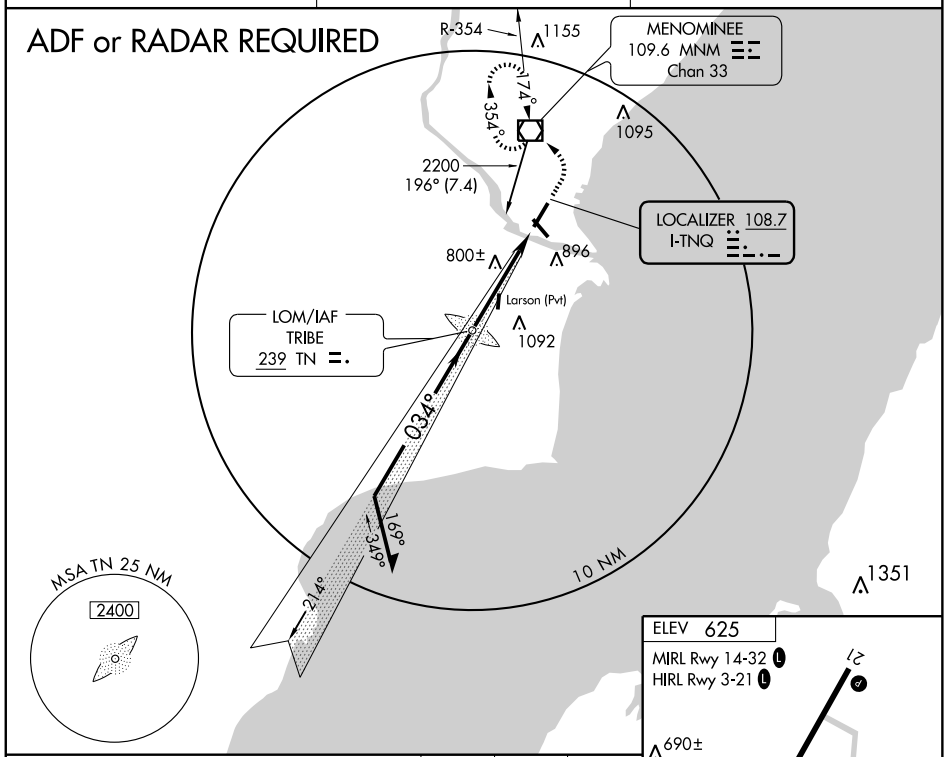
When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all DA/MDA 60 feet, increase S-LOC 3 Cat C/D and Circling Cat C visibility ¼ mile. For inoperative MALSR when using Sturgeon Bay altimeter setting, increase S-ILS 3 all Cats visibility to 1 mile.

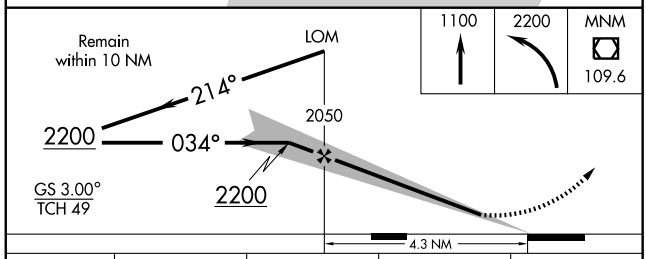
NA

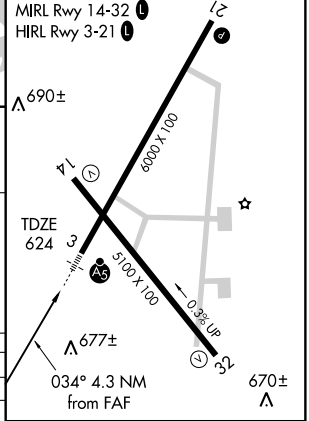
MALSR

MISSED APPROACH: Climb to 1100, then climbing left turn to 2200 direct MNM VOR/DME and hold.

AWOS-3	GREEN BAY APP CON ★		UNICOM
109.6	119.5	338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-ILS 3	824-½ 200 (200-½)			
S-LOC 3	1100-½ 476 (500-½)		1100-¾ 476 (500-¾)	1100-1 476 (500-1)
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM TN	APP CRS	Rwy ldg	6000
239	034°	TDZE	624
		Apt Elev	625

NDB RWY 3

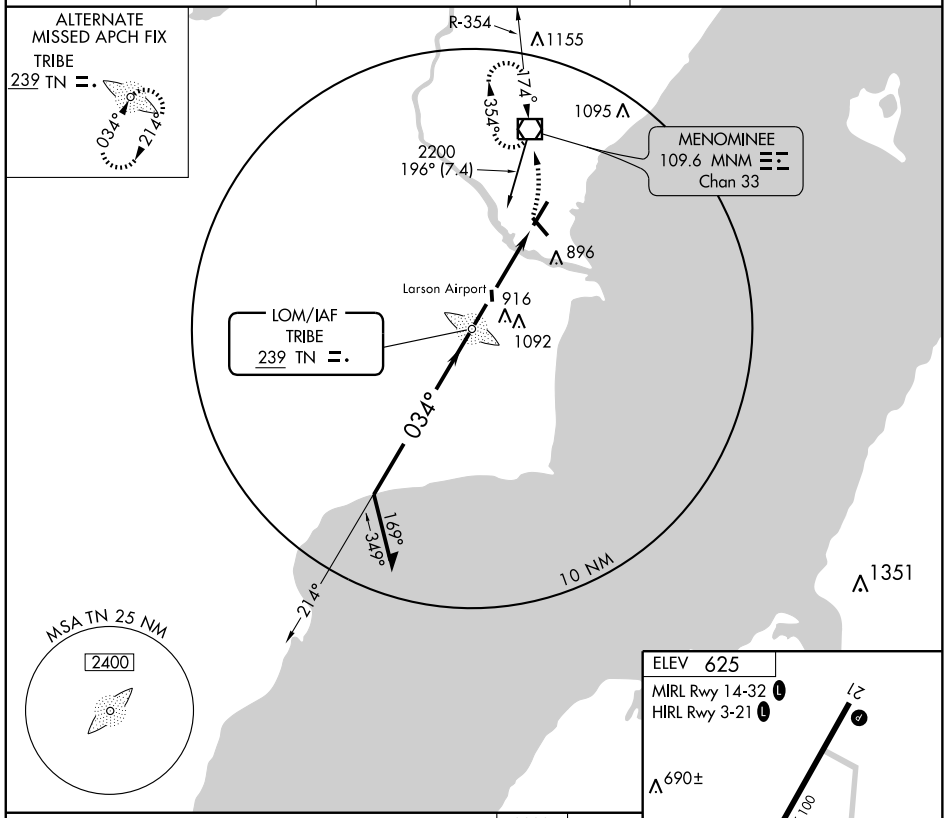
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

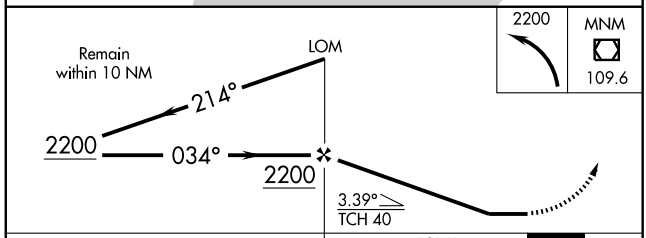
T A NA When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase S-3 Cat C/D and Circling Cat C visibility ¼ mile.

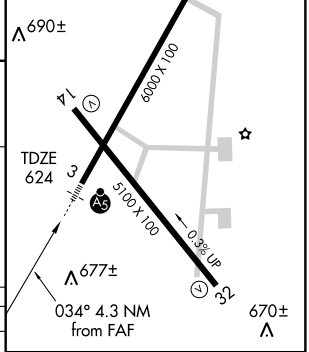
MALSR A5

MISSED APPROACH: Climbing left turn to 2200 direct MNM VOR/DME and hold.

AWOS-3	GREEN BAY APP CON ★	UNICOM
109.6	119.5 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-3	1200-¾ 576 (600-¾)		1200-1 576 (600-1)	1200-1½ 576 (600-1½)
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 73014 W03A	APP CRS 034°	Rwy ldg 6000 TDZE 624 Apt Elev 625

RNAV (GPS) RWY 3

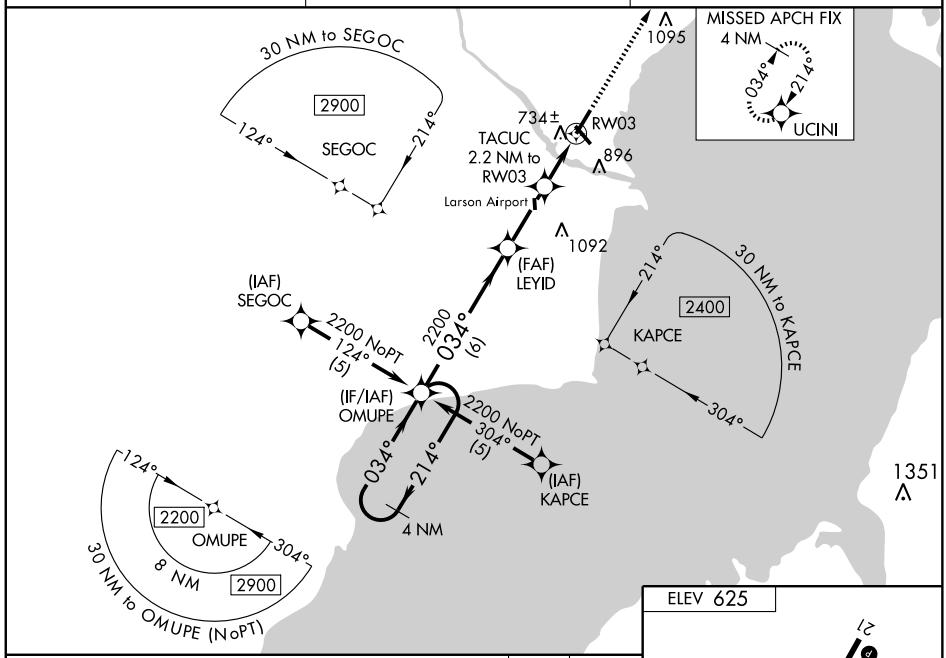
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

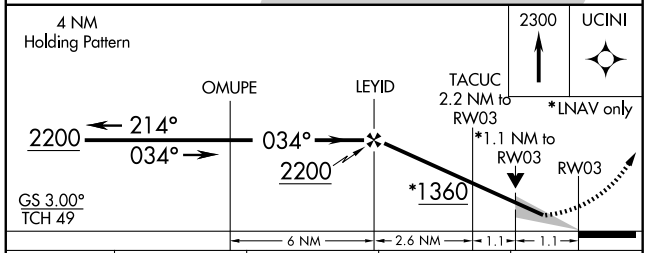
For inoperative MALSR, increase LNAV Cat D visibility to 1¼ . For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all DA/MDA 60 feet, increase LNAV Cat C and Circling Cat C visibility ¼ mile. Baro-VNAV and VDP NA when using Sturgeon Bay altimeter setting. For inoperative MALSR when using Sturgeon Bay altimeter setting, increase LPV all Cats visibility to 1 mile.

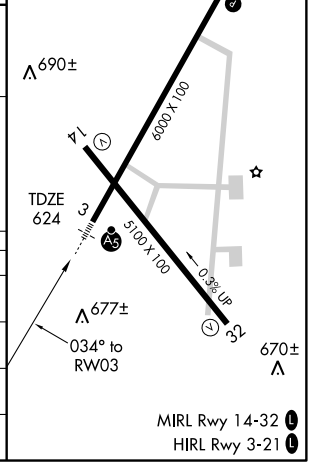
MALSR

MISSED APPROACH: Climb to 2300 direct UCINI and hold.

AWOS-3	GREEN BAY APP CON ★	UNICOM
109.6	119.5 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	824-½ 200 (200-½)			
LNAV/VNAV DA	1150-1½ 526 (600-1½)			
LNAV MDA	1000-½ 376 (400-½)			1000-1 376 (400-1)
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6000
214°	TDZE	625
	Apt Elev	625

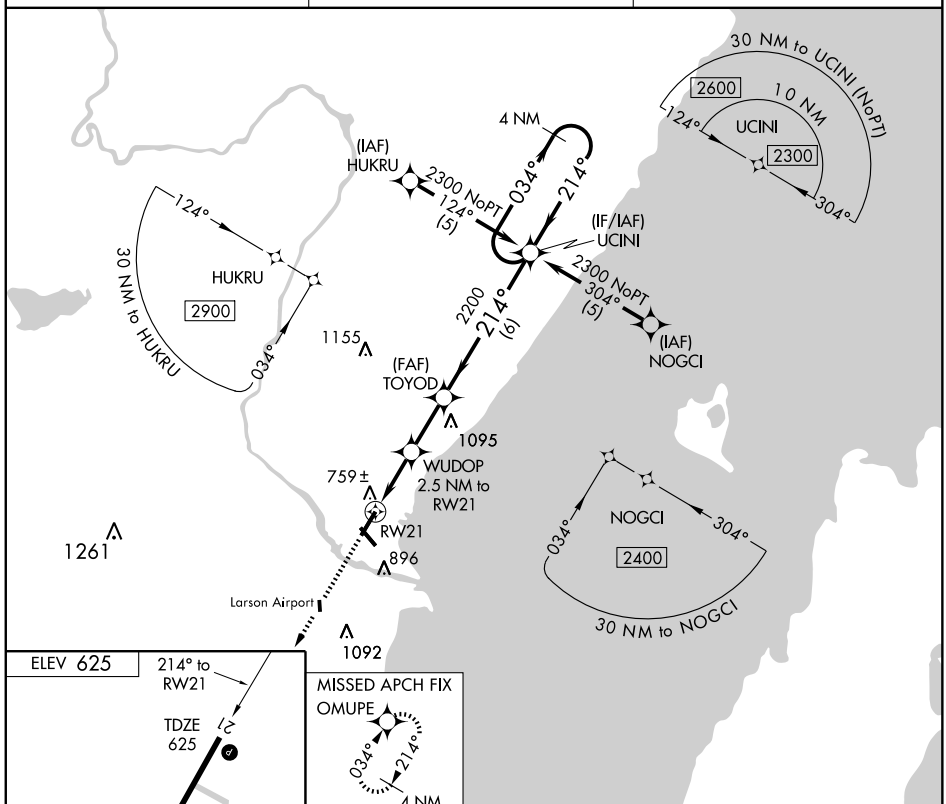
RNAV (GPS) RWY 21

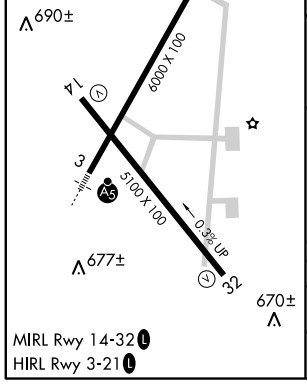
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

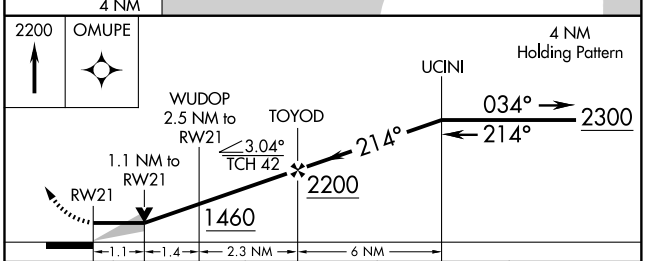
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ¼ mile. VDP NA when using Sturgeon Bay altimeter setting.

MISSED APPROACH: Climb to 2200 direct OMUPE and hold.

AWOS-3	GREEN BAY APP CON ★		UNICOM
109.6	119.5	338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1020-1 395 (400-1)			1020-1¼ 395 (400-1¼)
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

EC-1, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5100
323°	TDZE	608
	Apt Elev	625

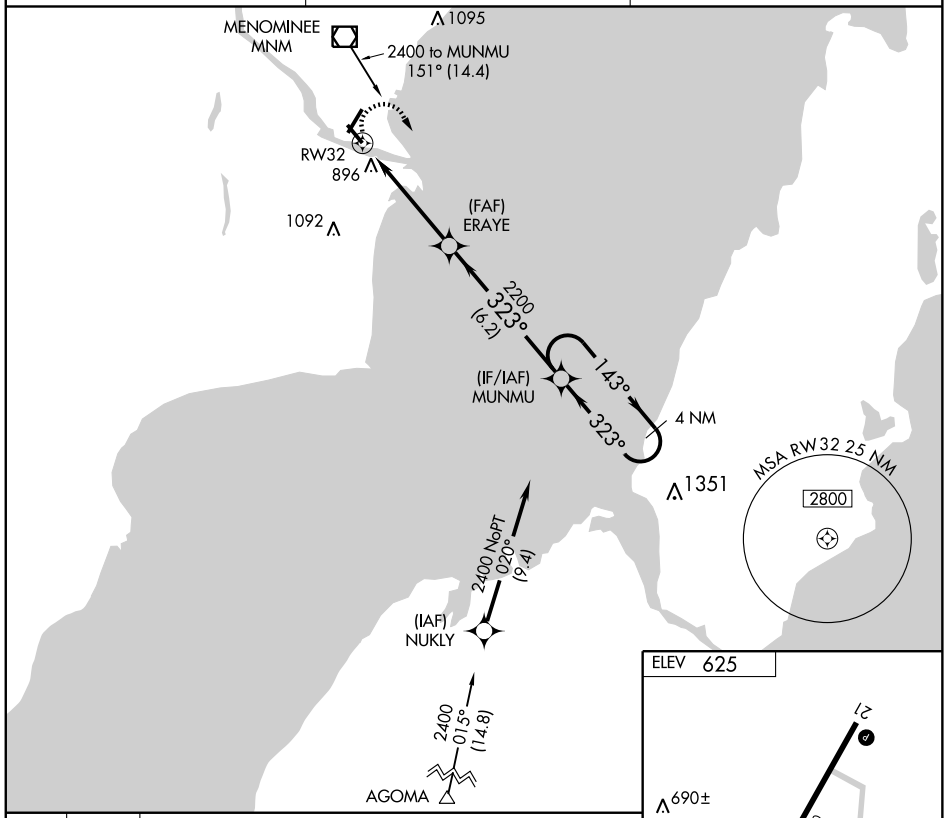
RNAV (GPS) RWY 32

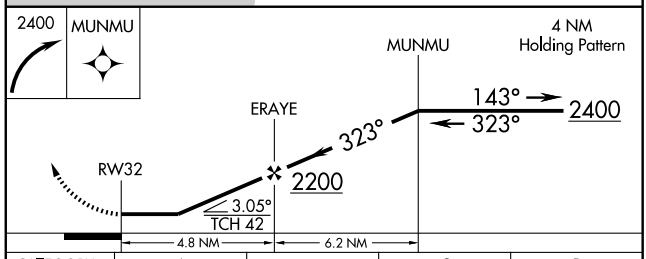
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

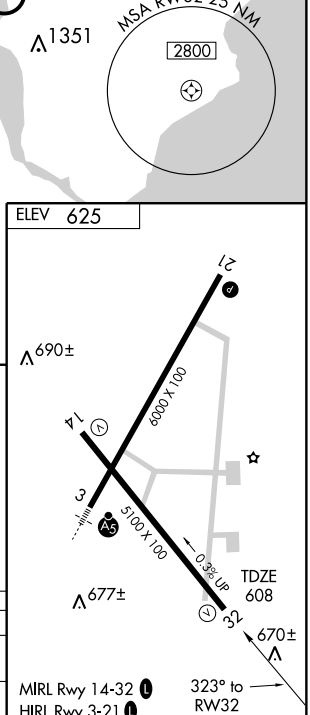
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climbing right turn to 2400 direct MUNMU WP and hold.

AWOS-3	GREEN BAY APP CON ★		UNICOM
109.6	119.5	338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1160-1 552 (600-1)		1160-1½ 552 (600-1½)	1160-1¾ 552 (600-1¾)
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MNM	APP CRS	Rwy ldg	N/A
109.6	174°	TDZE	N/A
Chan 33		Apt Elev	625

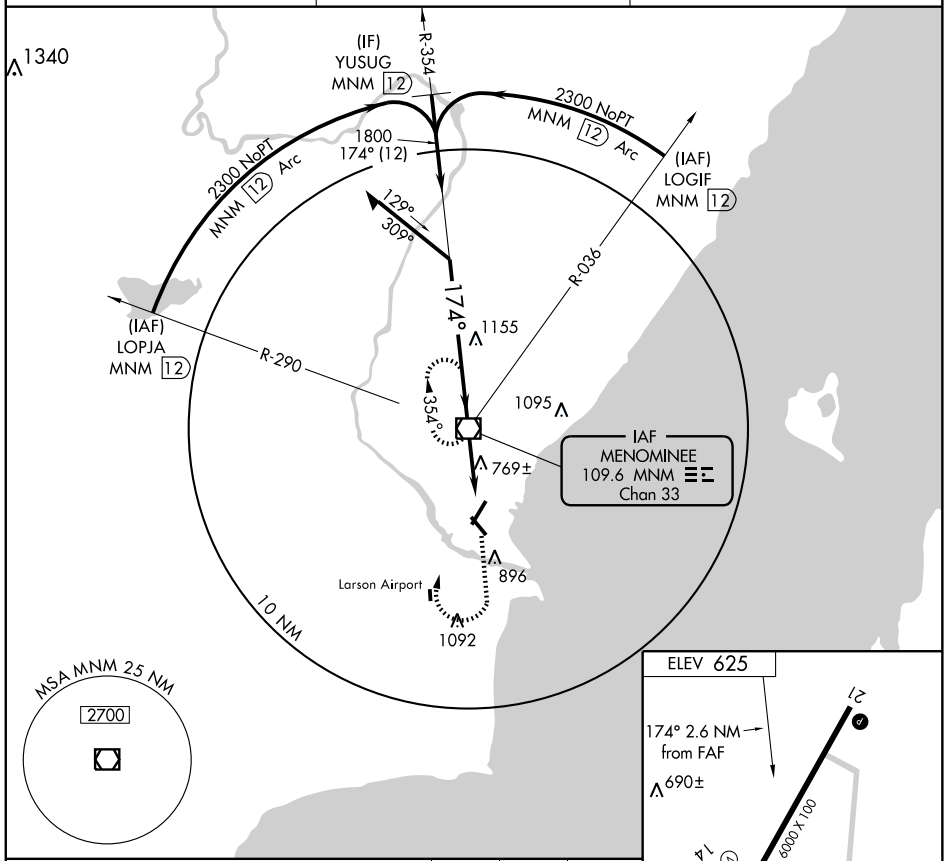
VOR-A

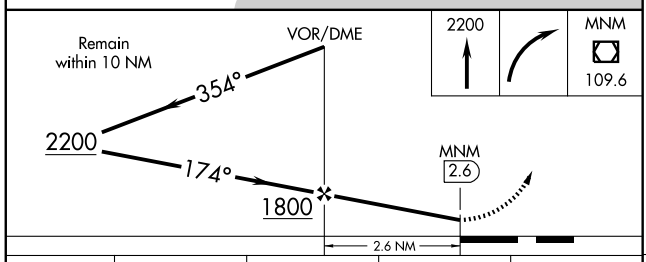
MENOMINEE-MARINETTE TWIN COUNTY (MNM)

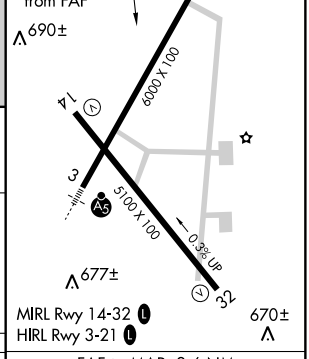
When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase MDA 60 feet, increase Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2200 then right turn direct MNM VOR/DME and hold.

AWOS-3	GREEN BAY APP CON★	UNICOM
109.6	119.5 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1200-2 575 (600-2)

FAF to MAP 2.6 NM					
Knots	60	90	120	150	180
Min:Sec	2:36	1:44	1:18	1:02	0:52

EC-1. 14 JAN 2010 to 11 FEB 2010

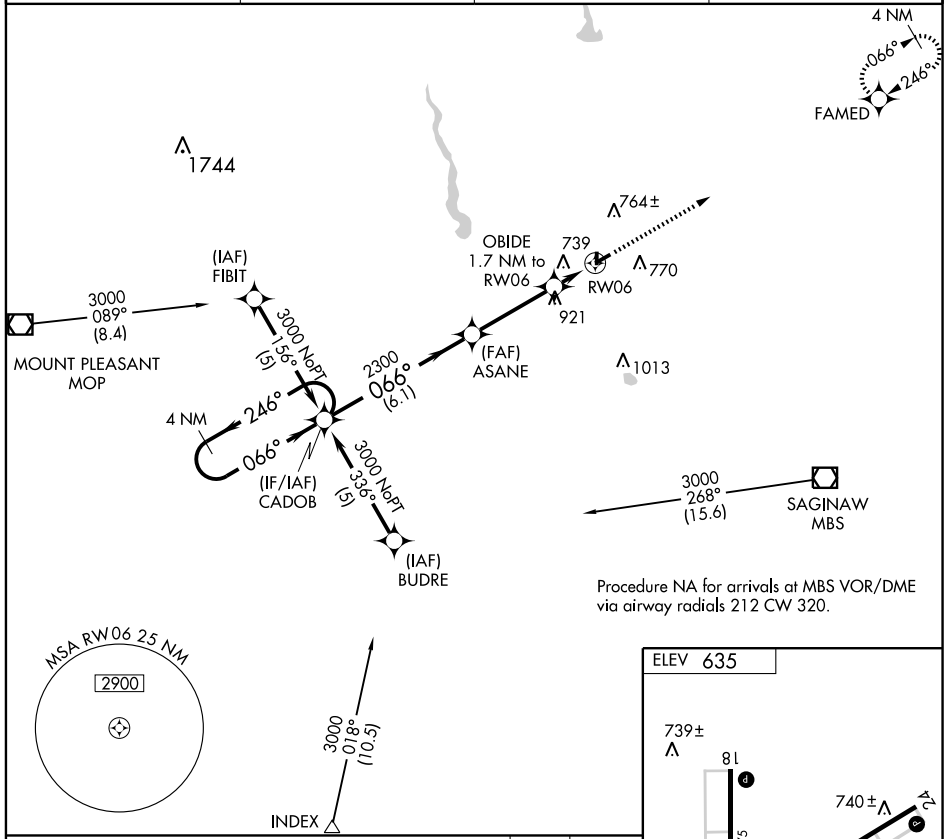
APP CRS	Rwy ldg	3801
066°	TDZE	628
	Apt Elev	635

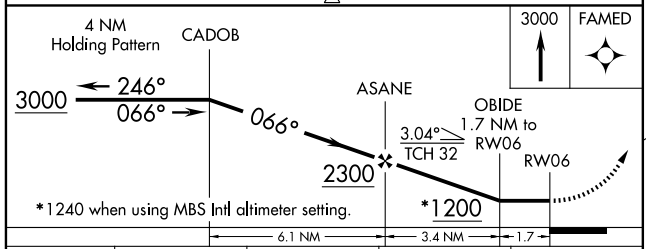
RNAV (GPS) RWY 6
MIDLAND / JACK BARSTOW (IKW)

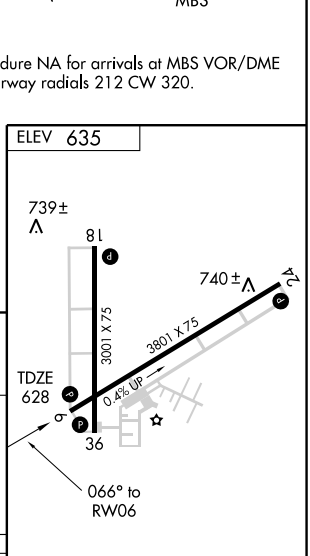
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 40 feet and LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct FAMED and hold.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
119.525	126.45 235.625	121.725	122.8 (CTAF)







CATEGORY	A	B	C	D
LNAV MDA	1000-1 372 (400-1)			NA
CIRCLING	1120-1 485 (500-1)		1120-1½ 485 (500-1½)	NA

REIL Rwys 6, 18, 24, and 36 (L)
MIRL Rwys 6-24 and 18-36 (L)

EC-1. 14 JAN 2010 to 11 FEB 2010

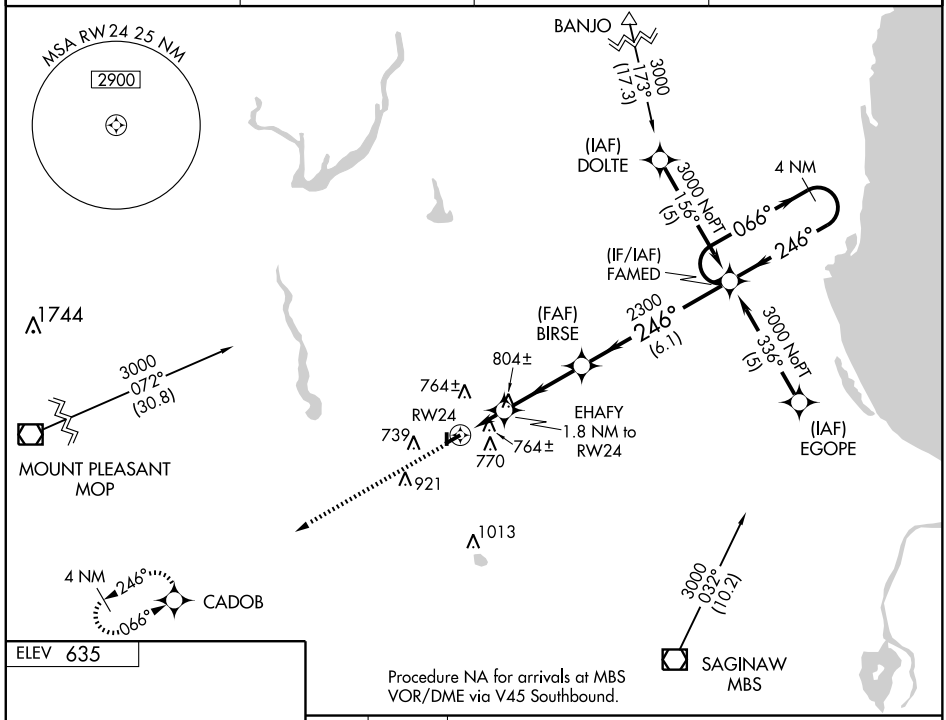
WAAS CH 72912 W24A	APP CRS 246°	Rwy ldg 3801 TDZE 635 Apt Elev 635

RNAV (GPS) RWY 24
MIDLAND / JACK BARSTOW (IKW)

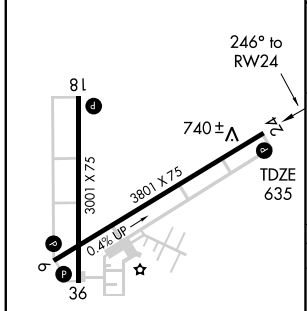
Baro-VNAV NA when using MBS Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.
Visibility reduction by helicopters NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all DA 31 feet and all MDA 40 feet and all LPV visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct CADOB and hold.

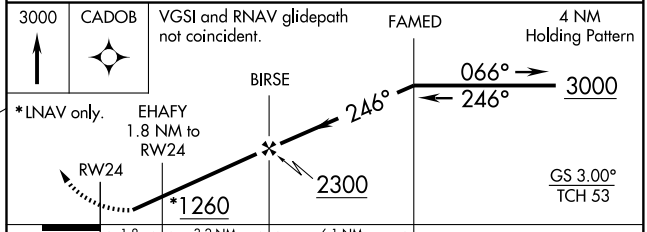
AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
119.525	126.45 235.625	121.725	122.8 (CTAF)



Procedure NA for arrivals at MBS VOR/DME via V45 Southbound.



REIL Rwys 6, 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L



CATEGORY		A	B	C	D
LPV	DA	1021-1¼ 386 (400-1¼)			NA
LNAV/VNAV	DA	1068-1½ 433 (500-1½)			NA
LNAV MDA		1060-1 425 (500-1)		1060-1¼ 425 (500-1¼)	NA
CIRCLING		1120-1 485 (500-1)		1120-1½ 485 (500-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 137°	Rwy ldg N/A TDZE N/A Apt Elev 635

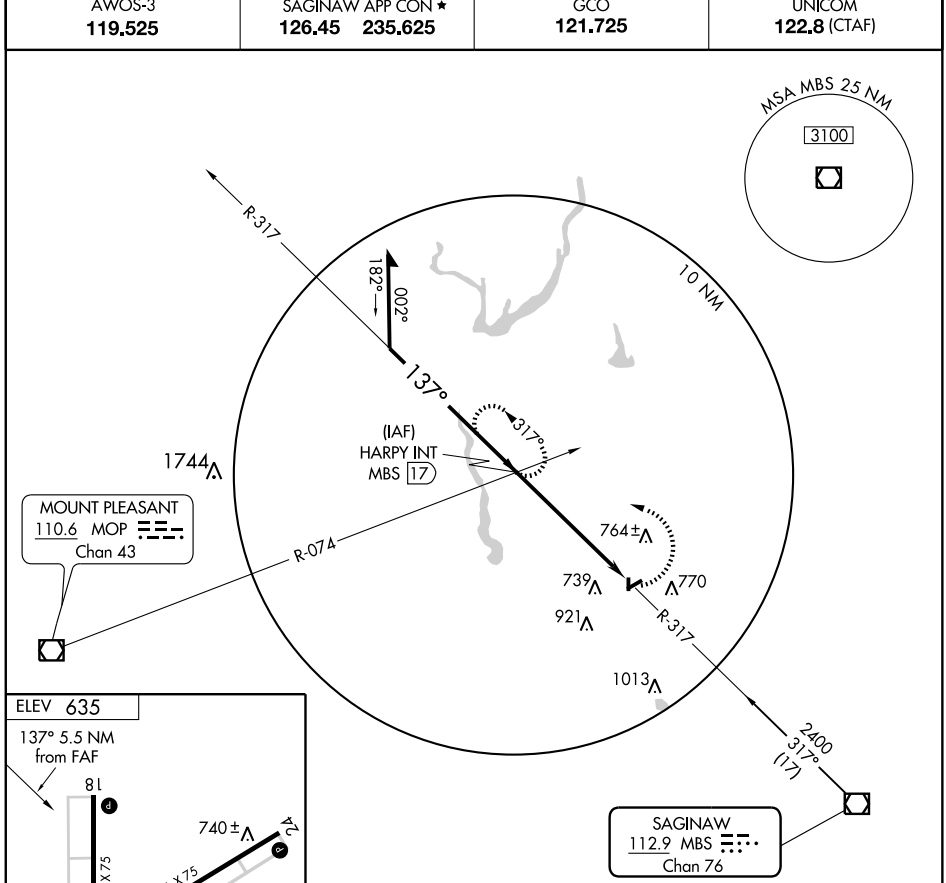
VOR-A

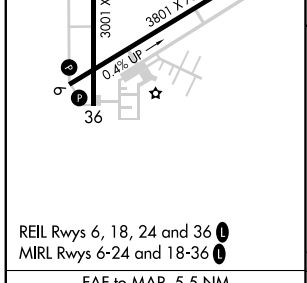
MIDLAND/ JACK BARSTOW (IKW)

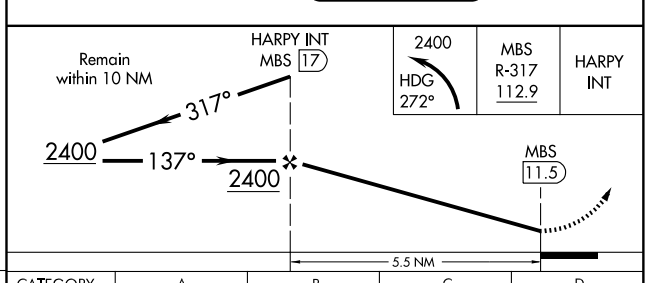
When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climbing left turn to 2400 via heading 272° and MBS VOR/DME R-317 to HARPY INT/17 DME and hold.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
119.525	126.45 235.625	121.725	122.8 (CTAF)





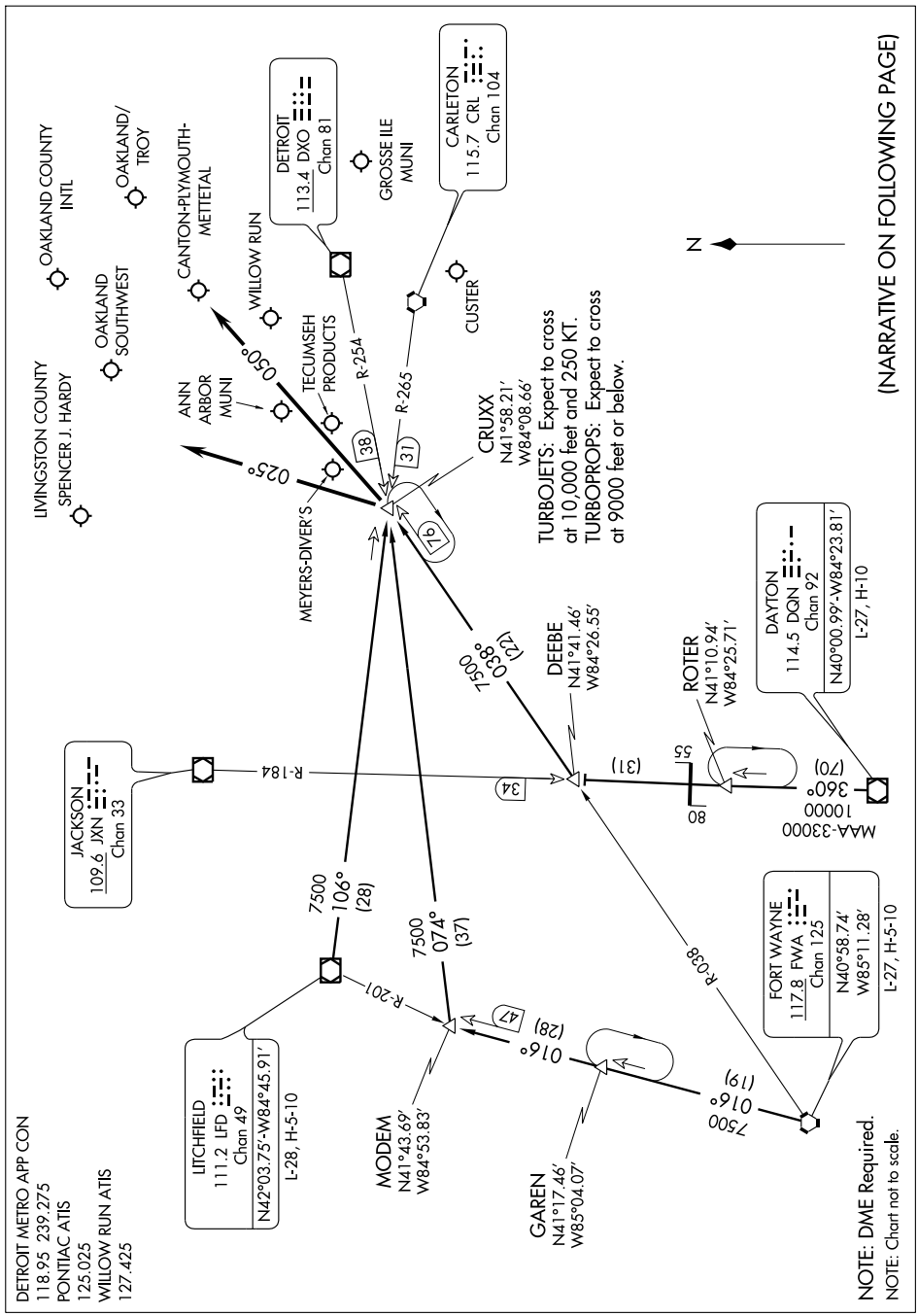


FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

CATEGORY	A	B	C	D
CIRCLING	1140-1 505 (600-1)		1140-1½ 505 (600-1½)	NA

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

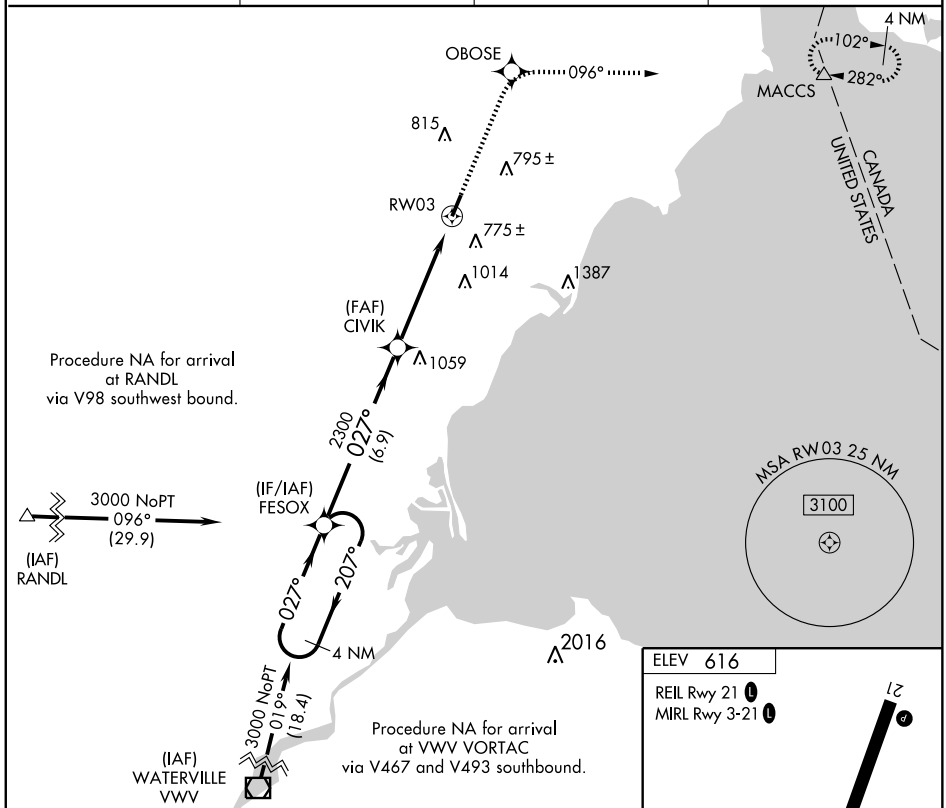
APP CRS	Rwy ldg	4997
027°	TDZE	614
	Apt Elev	616

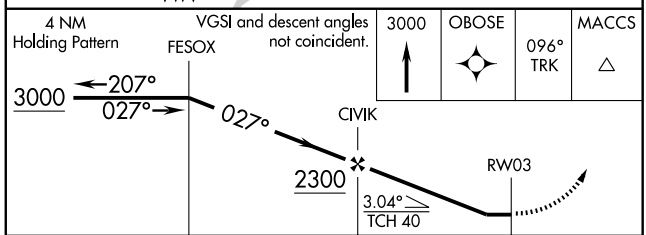
RNAV (GPS) RWY 3
MONROE/CUSTER (TTF)

When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 60 feet, LNAV Cat C/D visibility ¼ mile, and Circling Cat C visibility ¼ mile. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

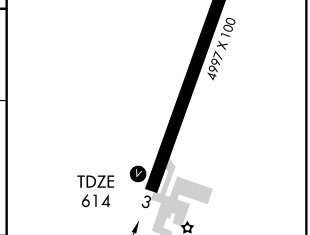
MISSED APPROACH: Climb to 3000 direct OBOSE and via 096° track to MACCS and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.075	134.3 363.2	121.725	122.7 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1100-1 486 (500-1)		1100-1¼ 486 (500-1¼)	1100-1½ 486 (500-1½)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-2)



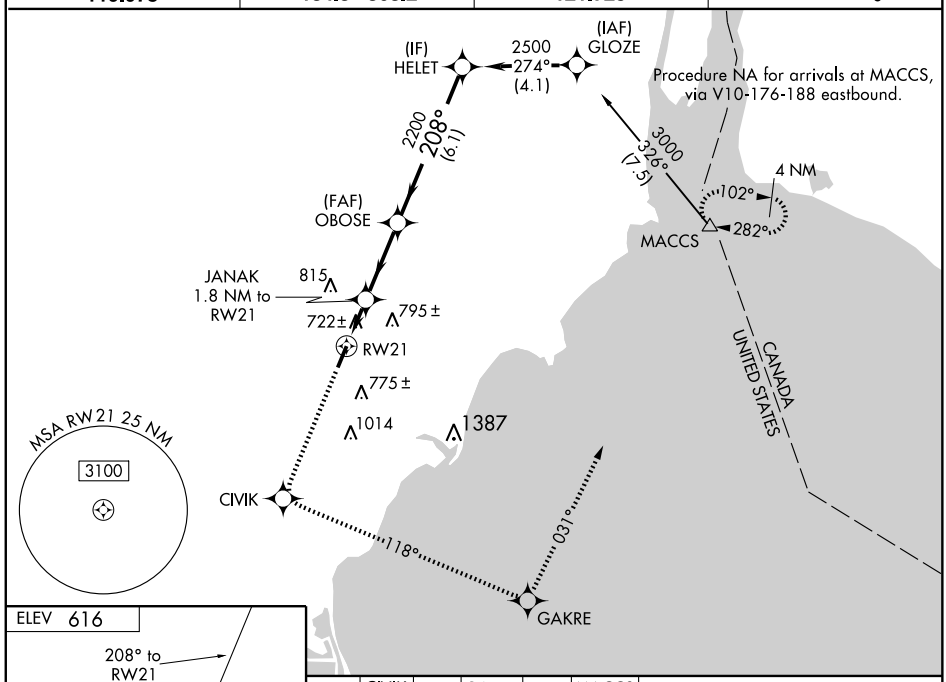
WAAS CH 86707 W21A	APP CRS 208°	Rwy ldg 4997 TDZE 616 Apt Elev 616

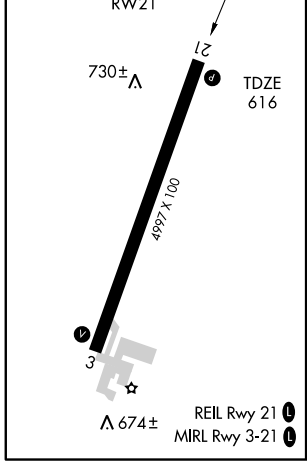
RNAV (GPS) RWY 21
MONROE/CUSTER (TTF)

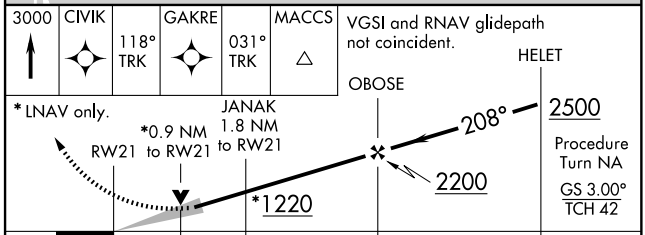
When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase LPV DA 43 feet and all visibilities ¼ mile, LNAV/VNAV DA 138 feet and all visibilities ½ mile and all MDA 60 feet and Cat C visibilities ¼ mile. Baro-VNAV and VDP NA when using Detroit Metropolitan Wayne County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct CIVIK and via 118° track to GAKRE and via 031° track to MACCS and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.075	134.3 363.2	121.725	122.7 (CTAF) L







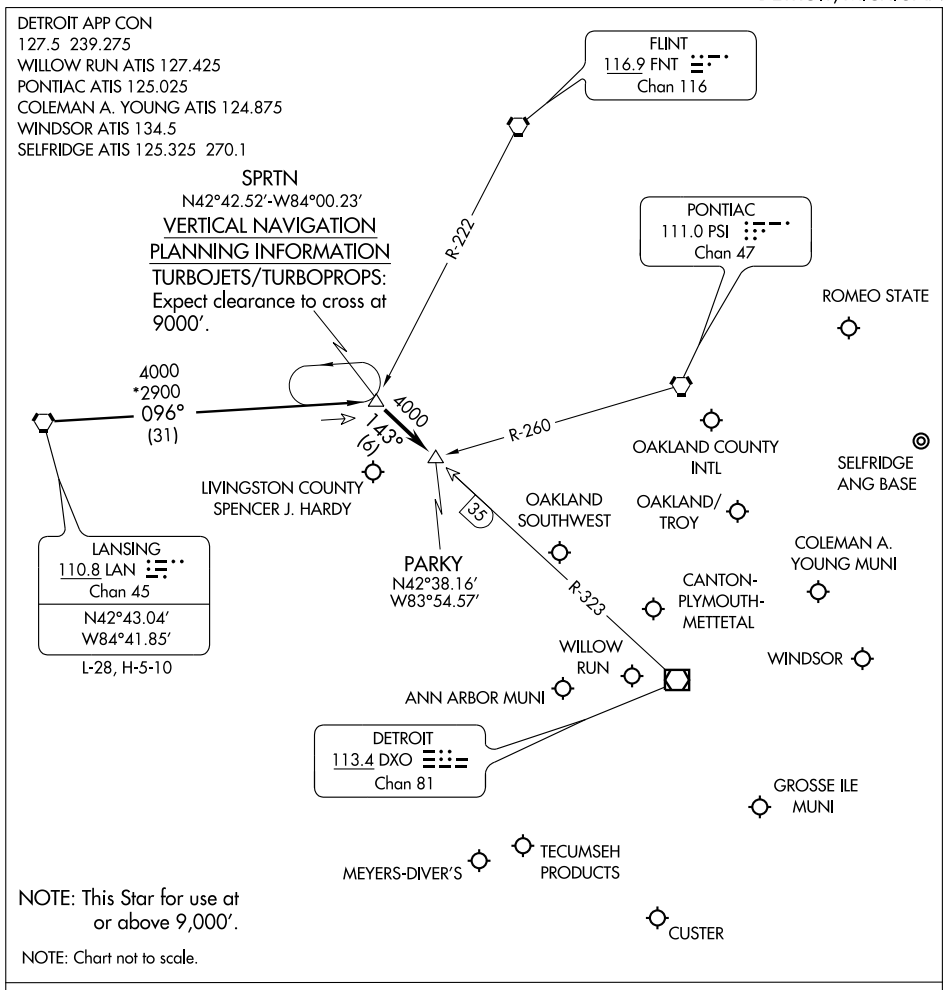
CATEGORY	A	B	C	D
LPV DA	966-1¼ 350 (400-1¼)			
LNAV/VNAV DA	1009-1½ 393 (400-1½)			
LNAV MDA	980-1 364 (400-1)			980-1¼ 364 (400-1¼)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-1)

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

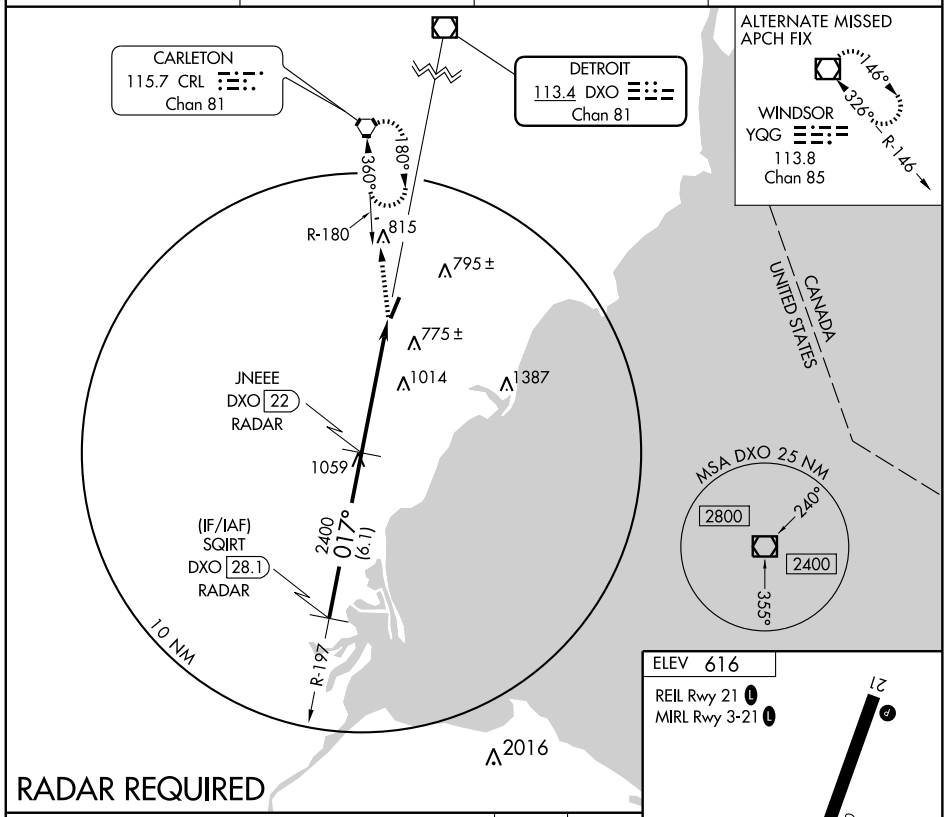
VOR/DME DXO 113.4 Chan 81	APP CRS 017°	Rwy ldg 4997 TDZE 614 Apt Elev 616

VOR RWY 3
MONROE/CUSTER (TTF)

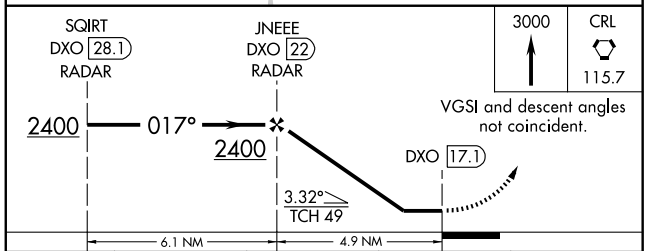
DME or RADAR required. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDAs 60 feet, and increase Cat C and D visibility ¼ mile.

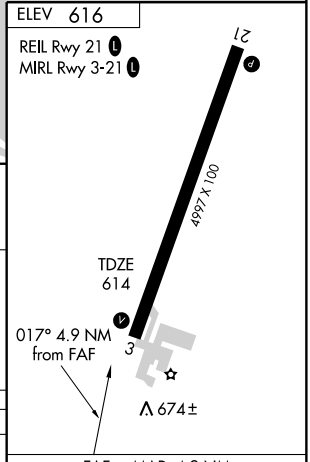
MISSED APPROACH: Climb to 3000 direct CRL VORTAC and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.075	134.3 363.2	121.725	122.7 (CTAF) L



RADAR REQUIRED





CATEGORY	A	B	C	D
S-3	1320-1 706 (800-1)		1320-2 706 (800-2)	1320-2¼ 706 (800-2¼)
CIRCLING	1320-1 704 (800-1)		1320-2 704 (800-2)	1320-2¼ 704 (800-2¼)

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME DXO	APP CRS	Rwy ldg	4997
113.4	196°	TDZE	616
Chan 81		Apt Elev	616

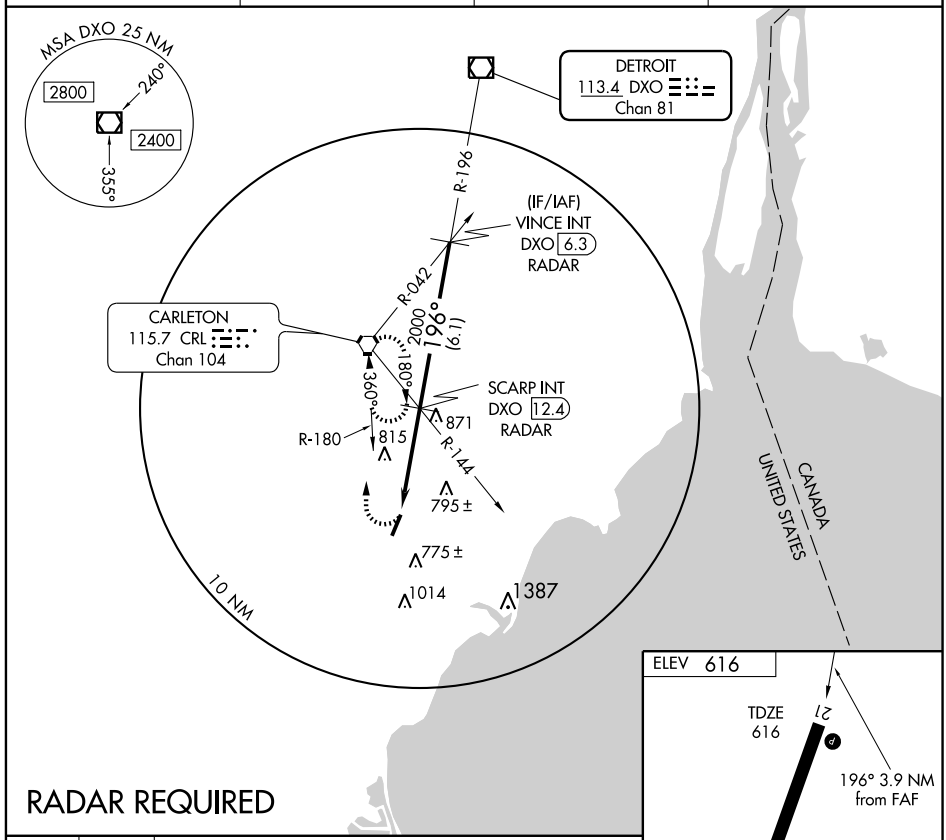
VOR RWY 21

MONROE/CUSTER (TTF)

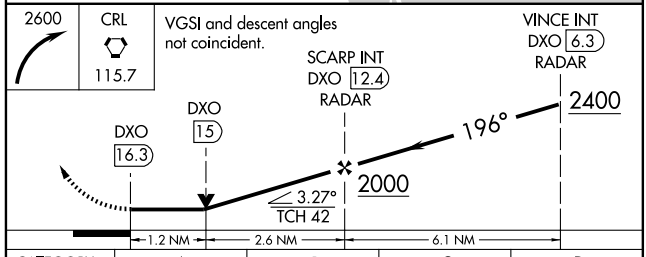
When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 60 feet, and increase Cat C and D visibility ¼ mile. VDP NA when using Detroit Metropolitan Wayne County altimeter setting.

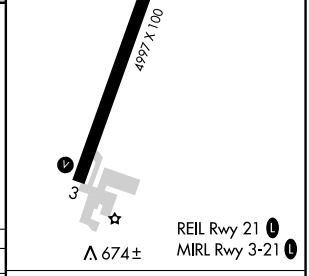
MISSED APPROACH: Climbing right turn to 2600 direct CRL VORTAC and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.075	134.3 363.2	121.725	122.7 (CTAF) L



RADAR REQUIRED





CATEGORY	A	B	C	D
S-21	1120-1	504 (600-1)	1120-1½	504 (600-1½)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-2)

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

EC-1. 14 JAN 2010 to 11 FEB 2010

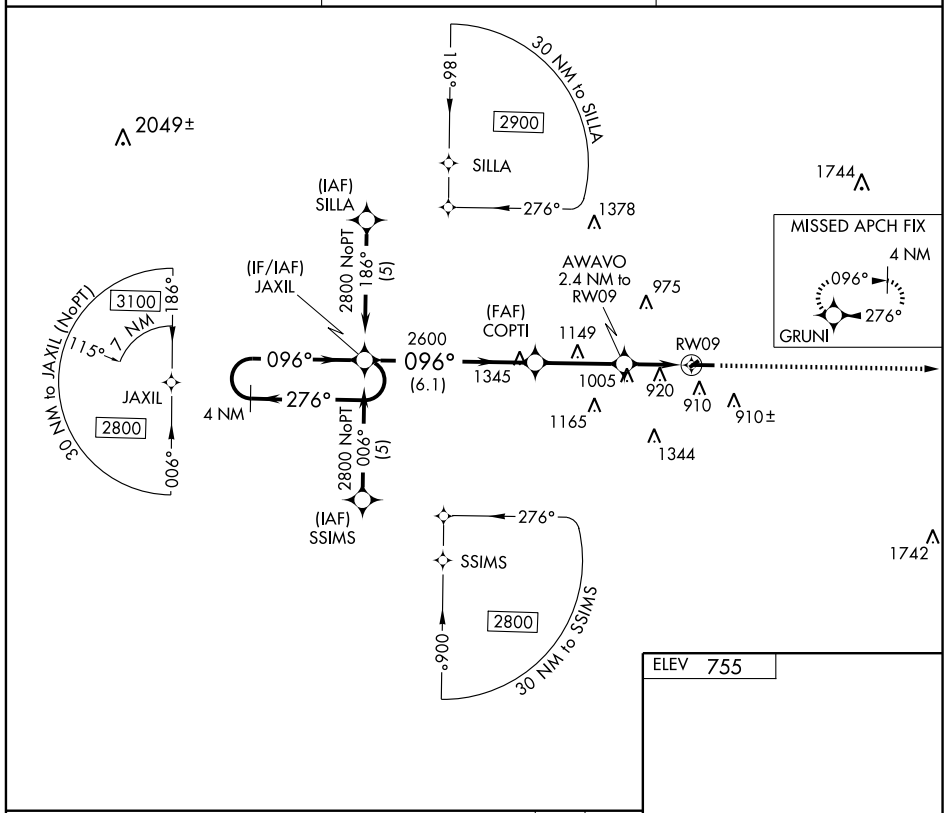
APP CRS	Rwy ldg	5001
096°	TDZE	755
	Apt Elev	755

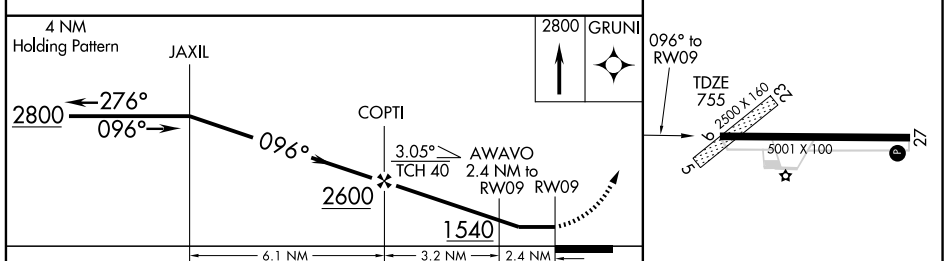
RNAV (GPS) RWY 9
MOUNT PLEASANT MUNI (MOP)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received use Alma altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2800 direct GRUNI and hold.

AWOS-3	SAGINAW APP CON ★		UNICOM
110.6	126.45	235.625	123.0 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1320-1 565 (600-1)		1320-1½ 565 (600-1½)	1320-1¾ 565 (600-1¾)
CIRCLING	1320-1 565 (600-1)		1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwy 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

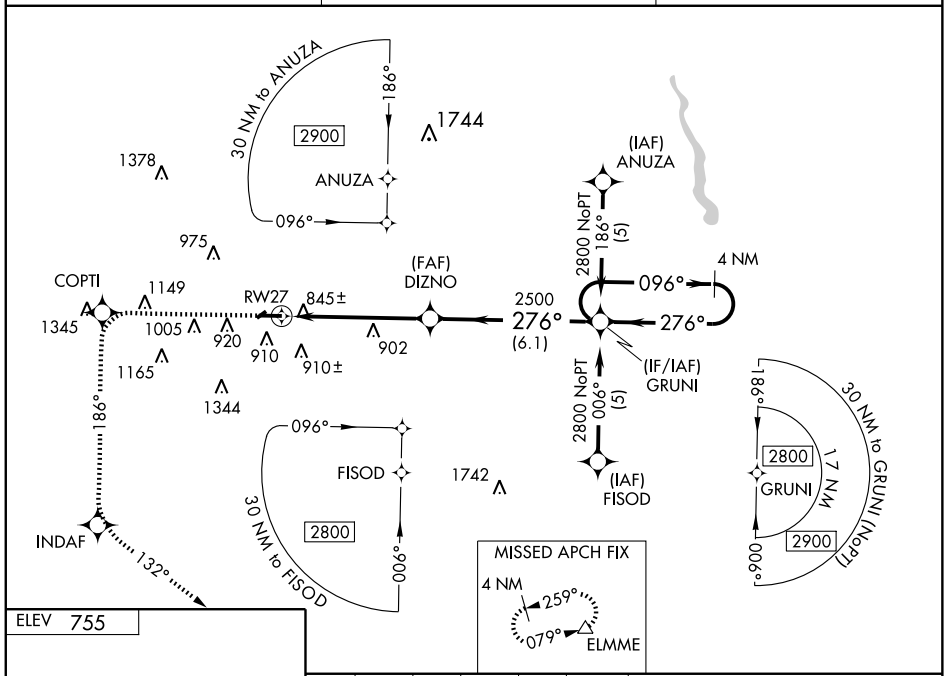
WAAS CH 82613 W27A	APP CRS 276°	Rwy ldg 5001 TDZE 753 Apt Elev 755

RNAV (GPS) RWY 27
MOUNT PLEASANT MUNI (MOP)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Alma altimeter setting and increase all DA 42 feet and all MDA 60 feet, increase LPV, LNAV/VNAV all Cats, LNAV Cat D and Circling Cat C visibilities ¼ mile. Baro-VNAV and VDP NA when using Alma altimeter setting.

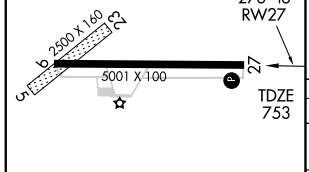
MISSED APPROACH: Climb to 3000 direct COPTI and via 186° track direct INDAF and via 132° track to ELMME and hold.

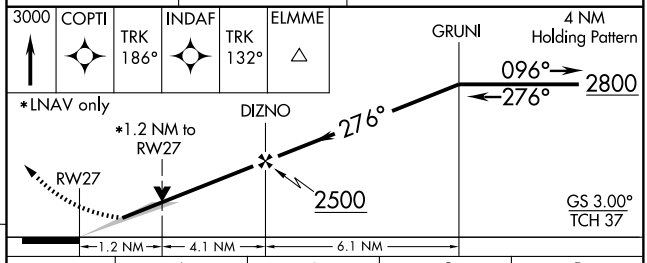
AWOS-3	SAGINAW APP CON ★	UNICOM
110.6	126.45 235.625	123.0 (CTAF) L



ELEV 755

3000	COPTI	TRK 186°	INDAF	TRK 132°	ELMME





CATEGORY	A	B	C	D
LPV DA	1099-1¼ 346 (400-1¼)			
LNAV/VNAV DA	1201-1½ 448 (500-1½)			
LNAV MDA	1160-1 407 (500-1)		1160-1¼ 407 (500-1¼)	
CIRCLING	1220-1 465 (500-1)		1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwy 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MOP	APP CRS	Rwy ldg	5001
110.6	284°	TDZE	753
Chan 43		Apt Elev	755

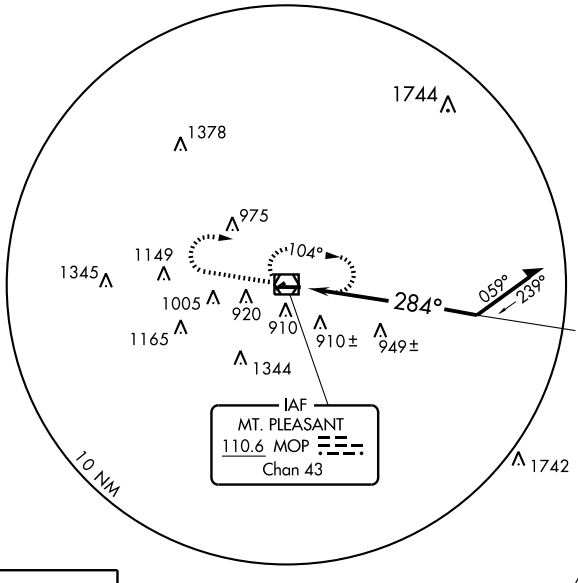
VOR RWY 27

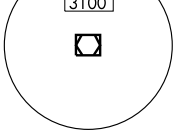
MOUNT PLEASANT MUNI (MOP)

Visibility reduction by helicopters NA. When local altimeter setting not received, use Alma altimeter setting and increase all MDA 60 feet, S-27 Cat D and Circling Cat C visibilities ¼ mile. VDP NA when using Alma altimeter setting.

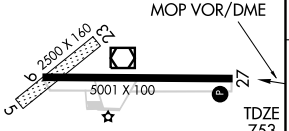
MISSED APPROACH: Climb to 2400 then right turn direct MOP VOR/DME and hold.

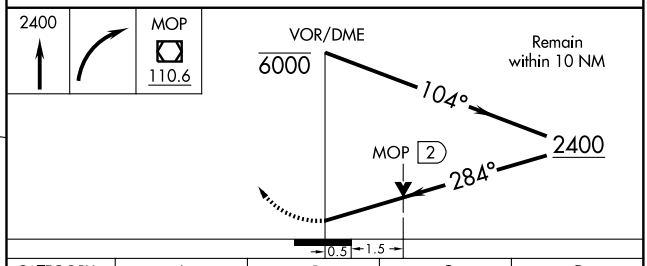
AWOS-3	SAGINAW APP CON ★		UNICOM
110.6	126.45	235.625	123.0 (CTAF) L





ELEV 755

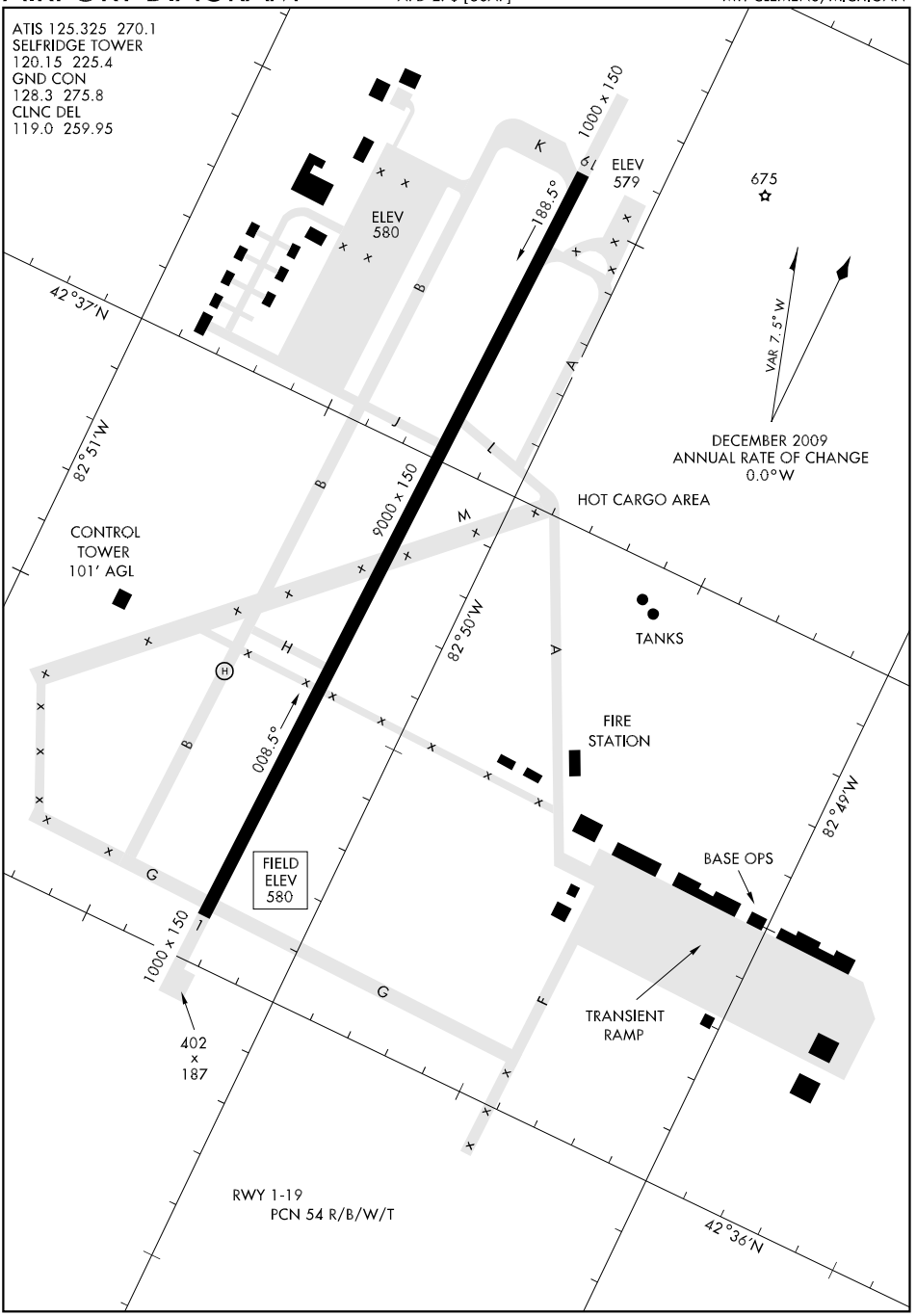




CATEGORY	A	B	C	D
S-27	1260-1 507 (600-1)		1260-1½ 507 (600-1½)	
CIRCLING	1260-1 505 (600-1)		1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwy 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010


ATIS 125.325 270.1
SELFRIDGE TOWER
120.15 225.4
GND CON
128.3 275.8
CLNC DEL
119.0 259.95
1000 x 150
K
67
ELEV
579
675
188.5°
ELEV
580
42°37'N
VAR 7.5° W
DECEMBER 2009
ANNUAL RATE OF CHANGE
0.0°W
82°51'W
HOT CARGO AREA
9000 x 150
CONTROL
TOWER
101' AGL
82°50'W
TANKS
FIRE
STATION
008.5°
82°49'W
BASE OPS
FIELD
ELEV
580
1000 x 150
TRANSIENT
RAMP
402
x
187
RWY 1-19
PCN 54 R/B/W/T
42°36'N

HI-ILS or LOC/DME RWY 1

LOC I-RFB	APCH CRS	Rwy ldg / TDZE / Arpt Elev
110.1	007°	9000 / 580 / 580

JAL-276 [USAF]

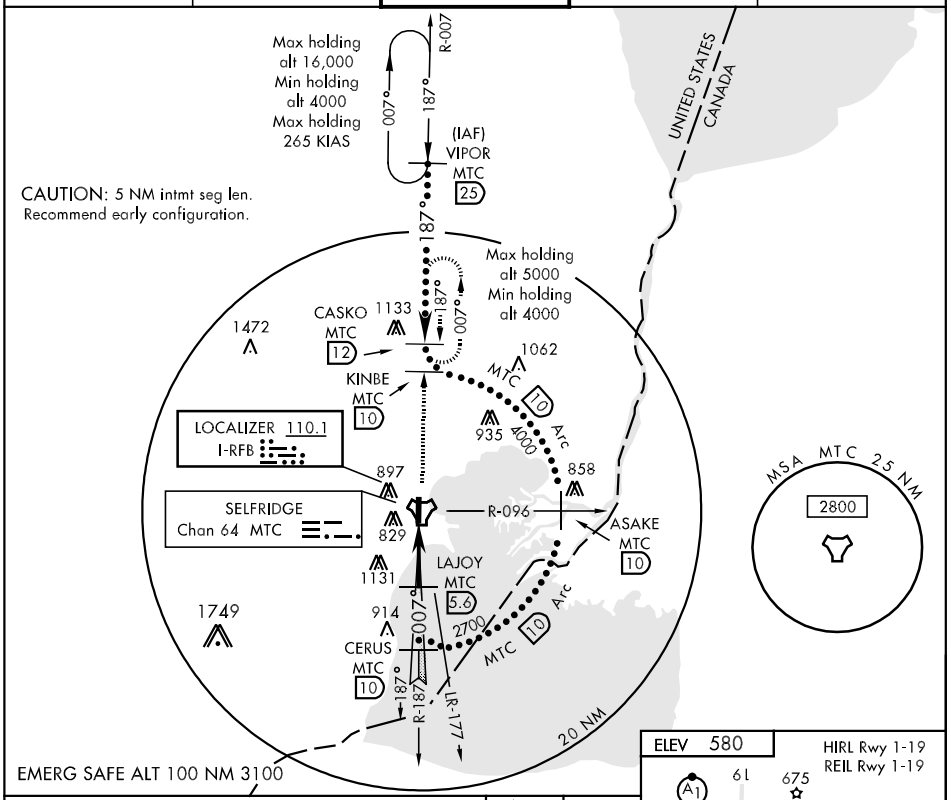
SELFRIDGE ANGB (KMTC)

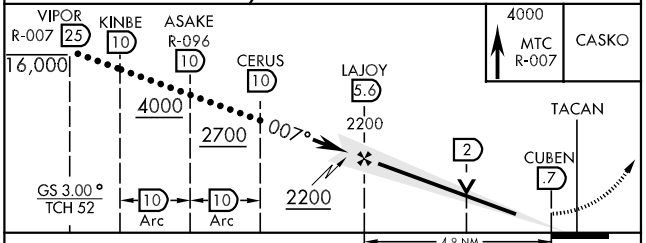
*When ALS inop, increase CAT C RVR to 60 and vis to 1¼ miles, CAT D vis to 1½ miles, CAT E vis to 1¾ miles.
**Circling not authorized W of Rwy 1-19.

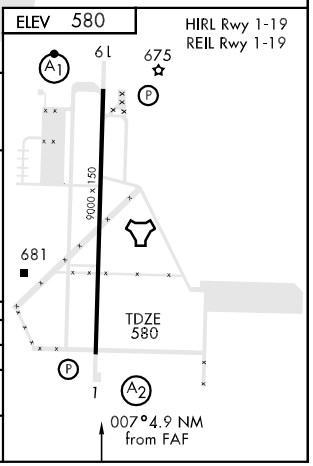
SALS A2

MISSED APPROACH: Climb to 4000, intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95







CATEGORY	C	D	E
S-ILS/DME 1	780/40 200 (200-¾)		
S-LOC/DME 1 *	1060/50 480 (500-1)	1060/60 480 (500-1¼)	1060-1½ 480 (500-1½)
CIRCLING **	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

HI-ILS or LOC/DME RWY 19

LOC I-MTC	APCH CRS	Rwy ldg / TDZE / Arpt Elev
110.1	187°	9000 / 579 / 580

JAL-276 [USAF]

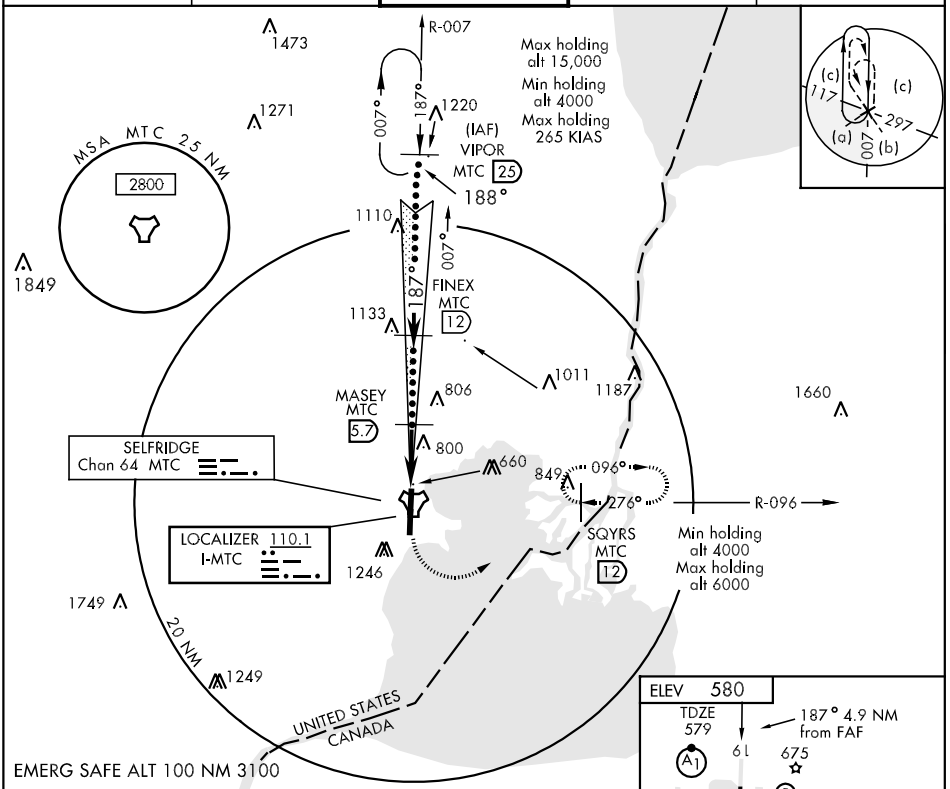
SELFRIDGE ANGB (KMTC)

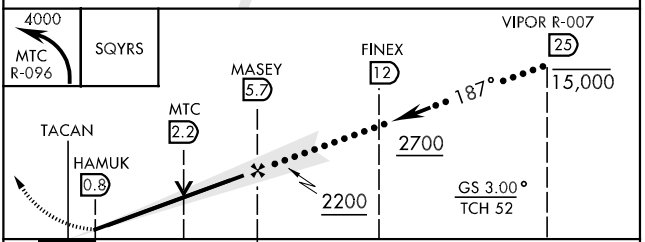
▼ * When ALS inop, increase RVR to 50 and vis to 1 mile.
* * When ALS inop, increase CAT CD vis to 1½ miles, CAT E vis to 1¾ miles.
* * * Circling not authorized W of Rwy 1-19.

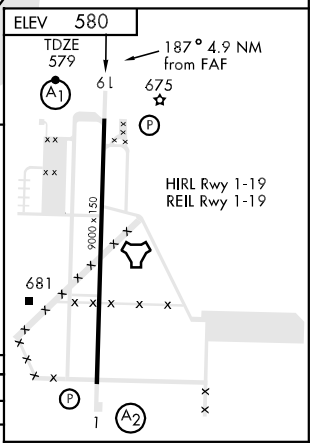
ALSF-1 (A1)

MISSED APPROACH: Climbing left turn to 4000, intercept MTC R-096 to SQYRS and hold, continue climb-in-hold to 4000..

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95







CATEGORY	C	D	E
S-ILS 19 *	882/40 303 (400-¾)		
S-LOC 19 * *	1080/50 501 (500-1)		1080/60 501 (500-1¼)
* * * CIRCLING	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

FAF to MAP 4.9 NM					
Knots	120	140	160	180	200
Min:Sec	2:27	2:06	1:50	1:38	1:28

EC-1, 14 JAN 2010 to 11 FEB 2010

HI-TACAN RWY 1

TACAN MTC Chan 64	APCH CRS 018°	Rwy ldg 9000 TDZE 580 Arpt Elev 580

JAL-276 [USAF]

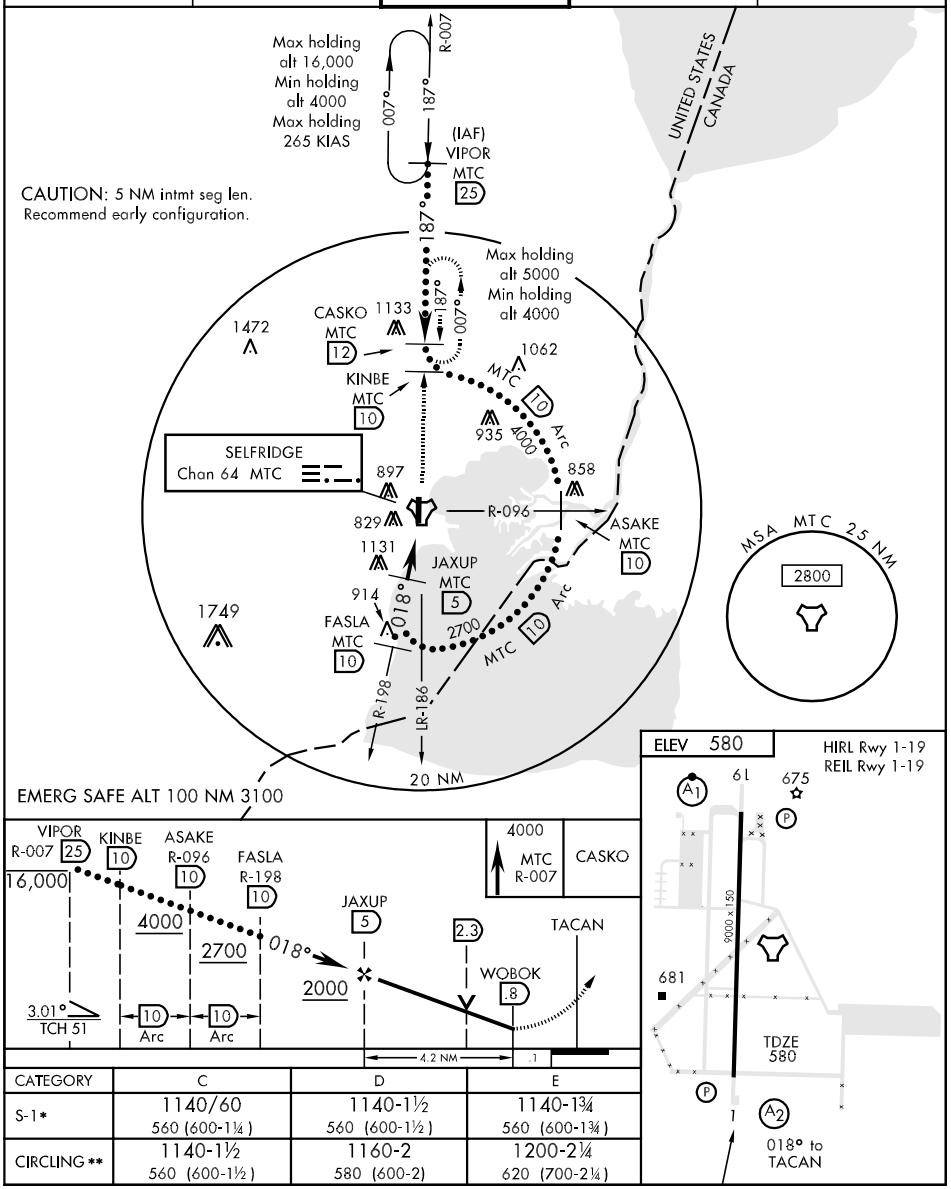
SELFRIDGE ANGB (KMTC)

*When ALS inop, increase CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.
**Circling not authorized W of Rwy 1-19.

SALS A2

MISSED APPROACH: Climb to 4000 and intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95



CATEGORY	C	D	E
S-1*	1140/60 560 (600-1¼)	1140-1½ 560 (600-1½)	1140-1¾ 560 (600-1¾)
CIRCLING**	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

HI-TACAN RWY 19

TACAN MTC Chan 64	APCH CRS 177°	Rwy ldg 9000 TDZE 579 Arpt Elev 580

JAL-276 [USAF]

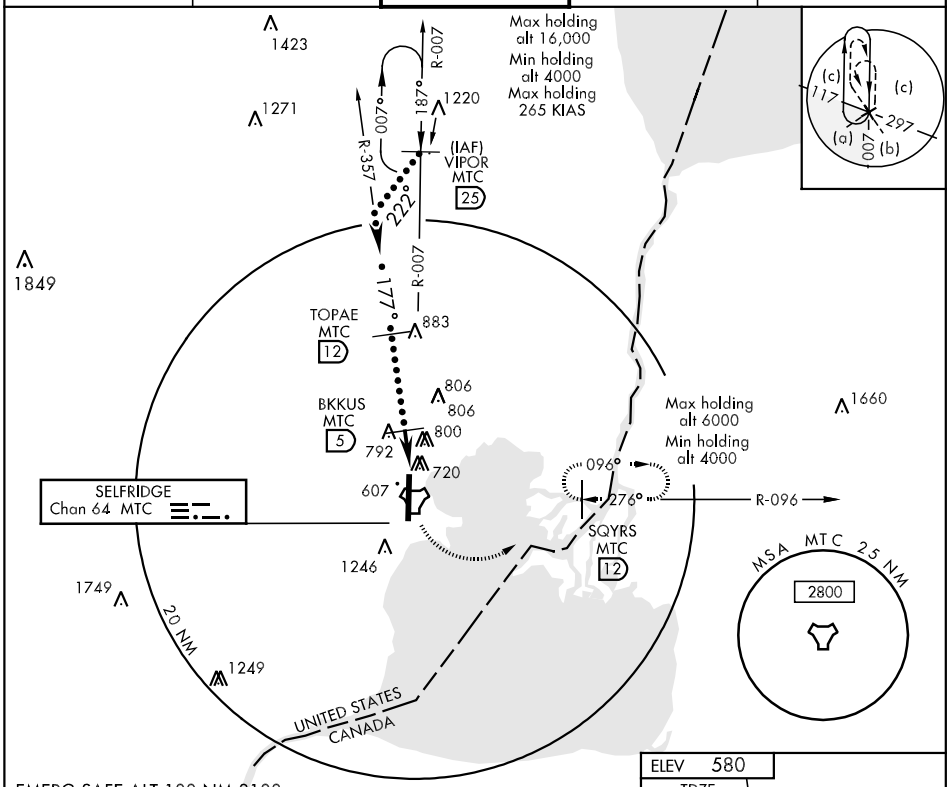
SELFRIDGE ANGB (KMTC)

▼ * When ALS inop, increase CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.
* * Circling not authorized W of Rwy 1-19.

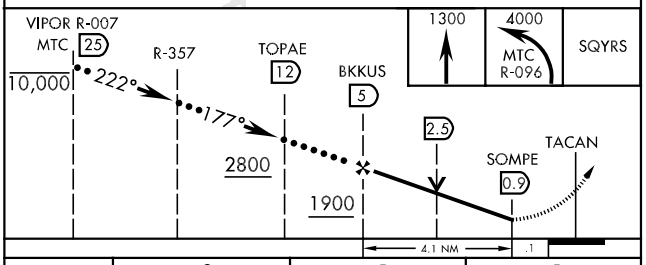
ALSF-1

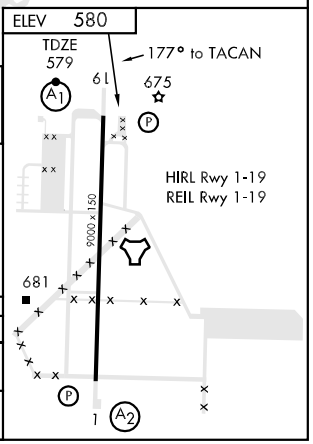
MISSED APPROACH: Climb to 1300 then climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95



EMERG SAFE ALT 100 NM 3100





CATEGORY	C	D	E
S- 19 *	1180/60 601 (600-1¼)	1180-1½ 601 (600-1½)	1180-1¾ 601 (600-1¾)
CIRCLING * *	1180-1¾ 600 (600-1¾)	1180-2 600 (600-2)	1200-2¼ 620 (700-2¼)

ILS or LOC/DME RWY 1

LOC I-RFB	APCH CRS	Rwy ldg / TDZE / Arpt Elev	AL-276 [USAF]	SELFRIDGE ANGB (KMTC)
110.1	007°	9000 / 580 / 580		

*When ALS inop, increase CAT AB RVR to 40 and vis to ¾ mile.
**When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C RVR to 60 and vis to 1¼ mile, CAT D vis to 1½, CAT E vis to 1¾.

SALS A2

MISSED APPROACH: Climb to 4000, intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95

*** Circling not authorized W of Rwy 1-19.

Max holding alt 5000
Min holding alt 4000

CASKO MTC 12
187° 007°
906 838
R-007

CAUTION: 5 NM Intermediate Segment Length. Recommend Early Configuration.

LOCALIZER 110.1 I-RFB

SELFRIDGE Chan 64 MTC

ASAKE MTC 10

Max holding alt 6000
Min holding alt 4000

096° 276° R-096

276° (IAF) SQYRS MTC 12

834 829 706 1246 1132

R-112

PONTIAC 111.0 PSI Chan 47

LAJOY MTC 5.6 /RADAR

UNITED STATES CANADA

2700

MTC 10 Arc

MSA MTC 2.5 NM 2800

10 NM

914

007°

CERUS MTC 10

187°

LR-177

EMERG SAFE ALT 100 NM 3100

SQYRS R-096 12 4000 276°

ASAKE 10

Intcp Lczr CERUS 10

2700

GS 3.00° TCH 52

10 Arc

LAJOY 5.6 /RADAR

007°

2200

2

CUBEN .7

TACAN

4.9 NM

4000 MTC R-007 CASKO

ELEV 580

HIRL Rwy 1-19
REIL Rwy 1-19

A1 6 L 675 P

9000 x 150

681

TDZE 580

P 1 A2

007° 4.9 NM from FAF

CATEGORY	A	B	C	D	E
S-ILS 01*	780/24	200 (200-½)	780/40 200 (200-¾)		
S-LOC 01**	1060/40	480 (500-¾)	1060/50 480 (500-1)	1060/60 480 (500-1¼)	1060-1½ 480 (500-1½)
CIRCLING***	1140-1	560 (600-1)	1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:36

ILS or LOC/DME RWY 19

LOC I-MTC	APCH CRS	Rwy ldg / TDZE / Arpt Elev
110.1	187°	9000 / 579 / 580

AL-276 [USAF]

SELFRIDGE ANGB (KMTC)

* When ALS inop, increase RVR to 50 and vis to 1 mile.
** When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C/D vis to 1½ miles, CAT E vis to 1¾ miles.

ALSF-1 (A1)

MISSED APPROACH: Climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95

*** Circling not authorized W of Rwy 1-19.

1133
FINEX MTC 12
007°
1011
1187
187°
LR-016
MASEY MTC 5.7 /RADAR
906
838
800
660
635
2700
MTC 12 Arc
SELFRIDGE Chan 64 MTC
LOCALIZER 110.1 I-MTC
R-096
096°
276°
(IAF) SQYRS MTC 12
Max holding alt 6000
Min holding alt 4000
1246
719
1132
10 NM
UNITED STATES
CANADA
MTC 10 Arc
MSA MTC 25 NM
2800

EMERG SAFE ALT 100 NM 3100

ELEV 580
TDZE 579
187° 4.9 NM from FAF
61
675
HIRL Rwy 1-19
REIL Rwy 1-19
9000 x 150
681
1

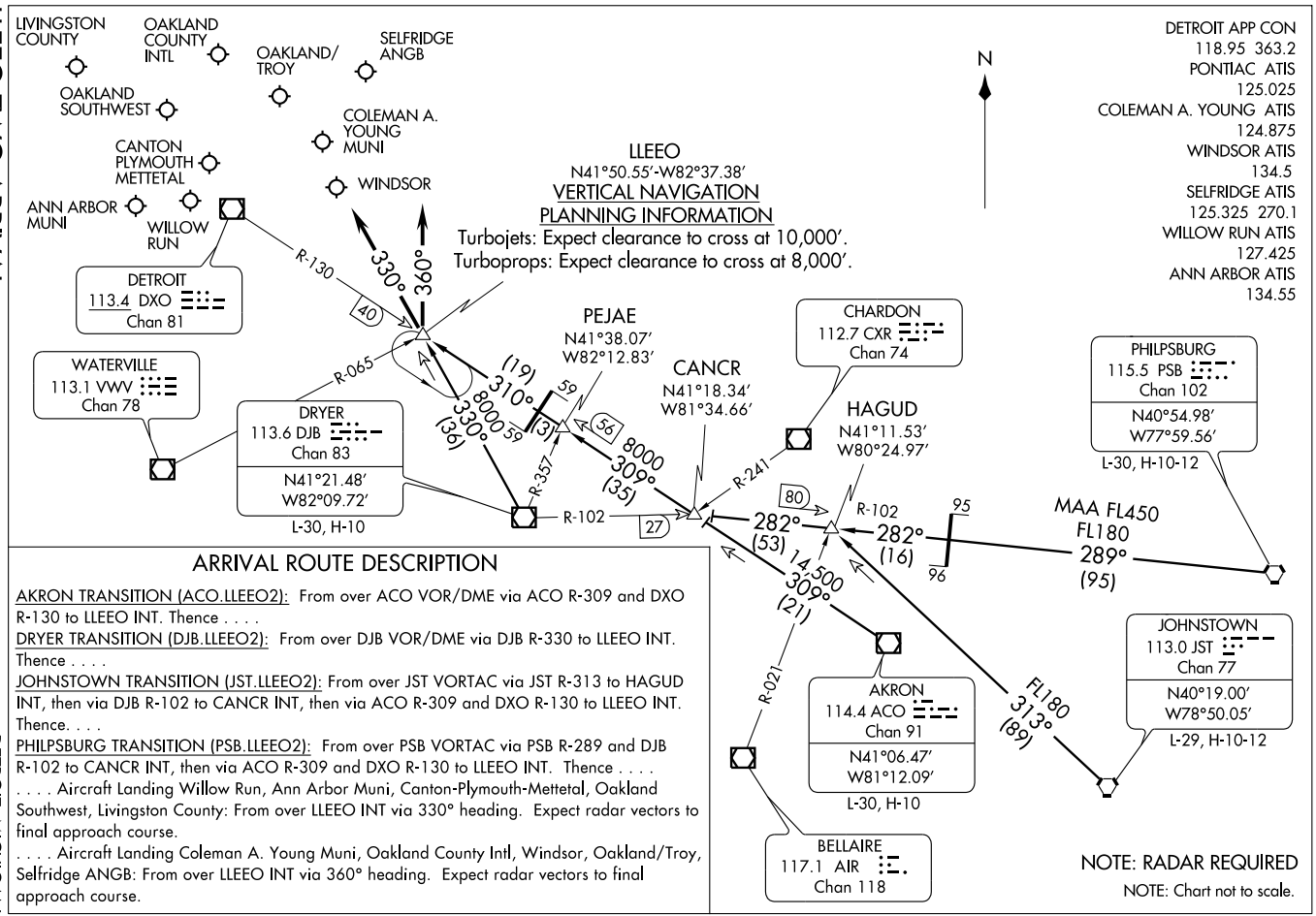
4000 MTC R-096
MTC R-096 12
SQYRS
MASEY 5.7 /RADAR
Intcp Lczr FINEX 12
SQYRS R-096 12
4000
TACAN
HAMUK .8
2.2
187°
2700
12 Arc
2200
GS 3.00°
TCH 52
4.9 NM

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

CATEGORY	A	B	C	D	E
S-ILS 19*	882/40 303 (400-¾)				
S-LOC 19**	1080/40 501 (500-¾)		1080/50 501 (500-1)		1080/60 501 (500-1¼)
CIRCLING***	1140-1 560 (600-1)		1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

EC-1, 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

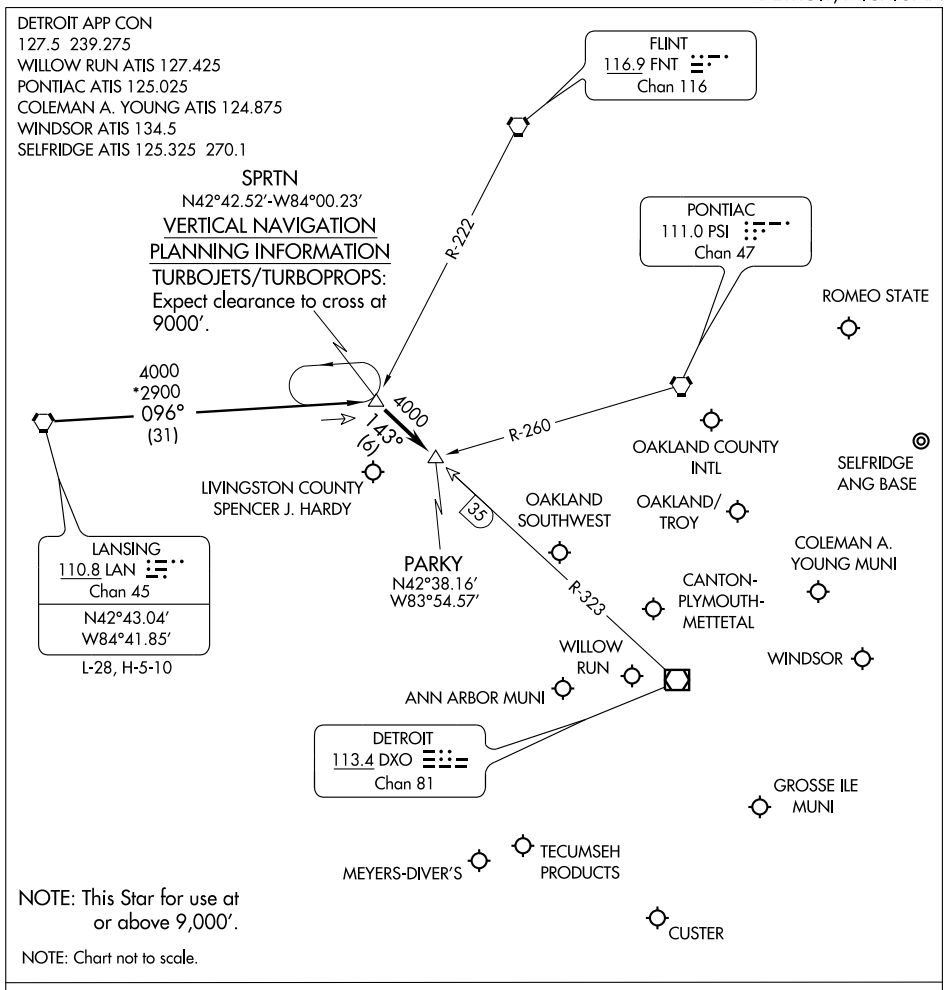
. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

TACAN RWY 1

TACAN MTC Chan 64	APCH CRS 018°	Rwy ldg 9000 TDZE 580 Arpt Elev 580	AL-276 [USAF]	SELFRIDGE ANGB (KMTC)

* When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C vis to 1½ miles, CAT D vis to 1¾ miles, CAT E vis to 2 miles.

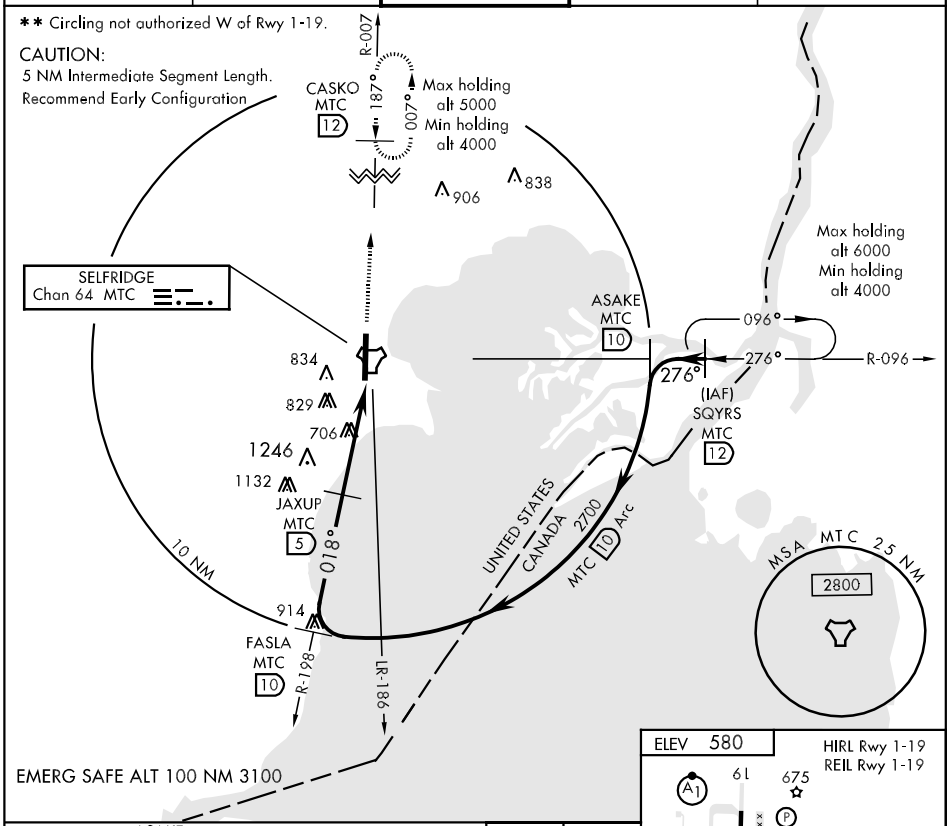
SALS: A2

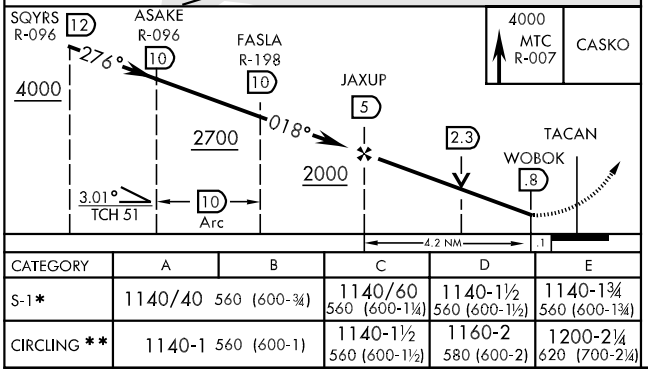
MISSED APPROACH: Climb to 4000, intercept MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

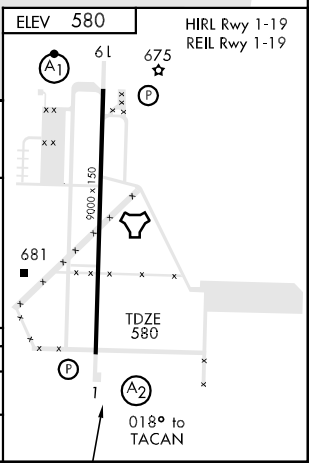
ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95

** Circling not authorized W of Rwy 1-19.

CAUTION:
5 NM Intermediate Segment Length.
Recommend Early Configuration







CATEGORY	A	B	C	D	E
S-1*	1140/40 560 (600-¾)		1140/60 560 (600-1¼)	1140-1½ 560 (600-1½)	1140-1¾ 560 (600-1¾)
CIRCLING **	1140-1 560 (600-1)		1140-1½ 560 (600-1½)	1160-2 580 (600-2)	1200-2¼ 620 (700-2¼)

TACAN RWY 19

TACAN MTC Chan 64	APCH CRS 177°	Rwy ldg 9000 TDZE 579 Arpt Elev 580

AL-276 [USAF]

SELFRIDGE ANGB (KMTC)

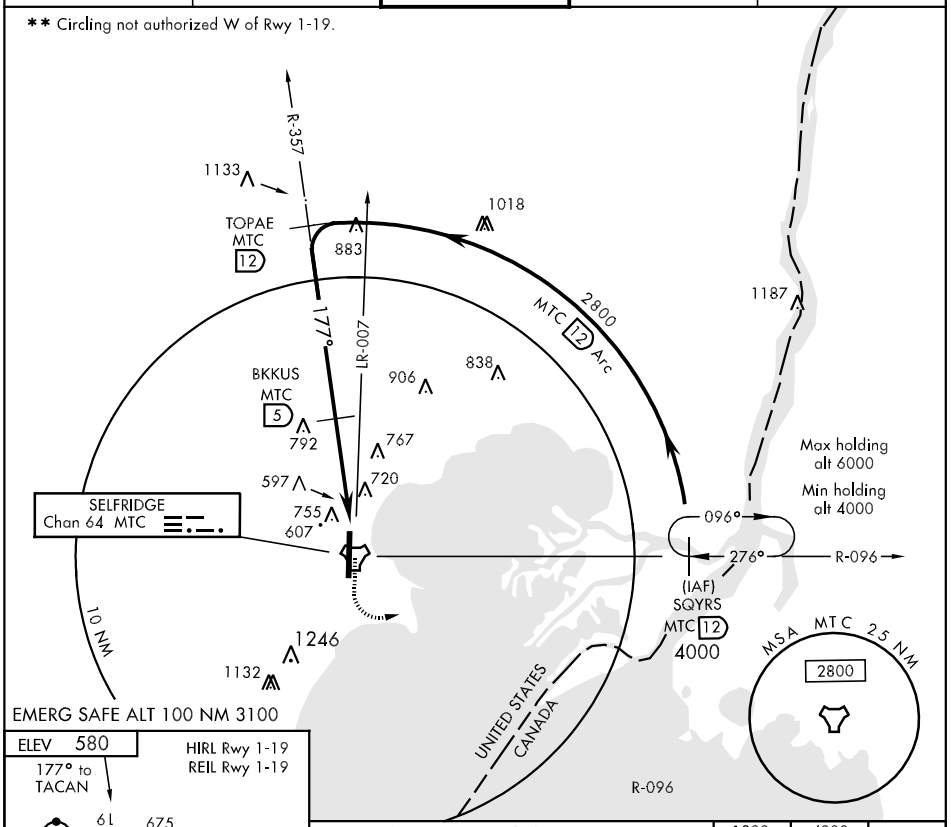
T * When ALS inop, increase CAT AB RVR to 50 and vis to 1 mile, CAT C vis to 1¾ miles, CAT D vis to 2 miles, CAT E vis to 2¼ miles.

ALSF-1 A1

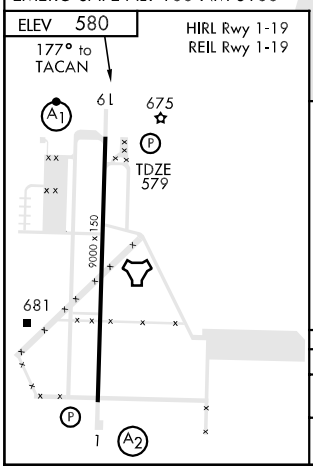
MISSED APPROACH: Climb to 1300 then climbing left turn to 4000, intercept MTC TACAN R-096 to SQYRS and hold, continue climb-in-hold to 4000.

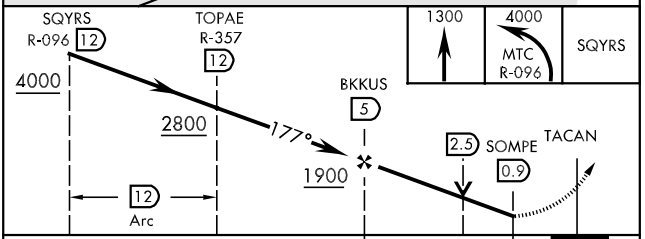
ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 225.4	128.3 275.8	119.0 259.95

** Circling not authorized W of Rwy 1-19.



EMERG SAFE ALT 100 NM 3100





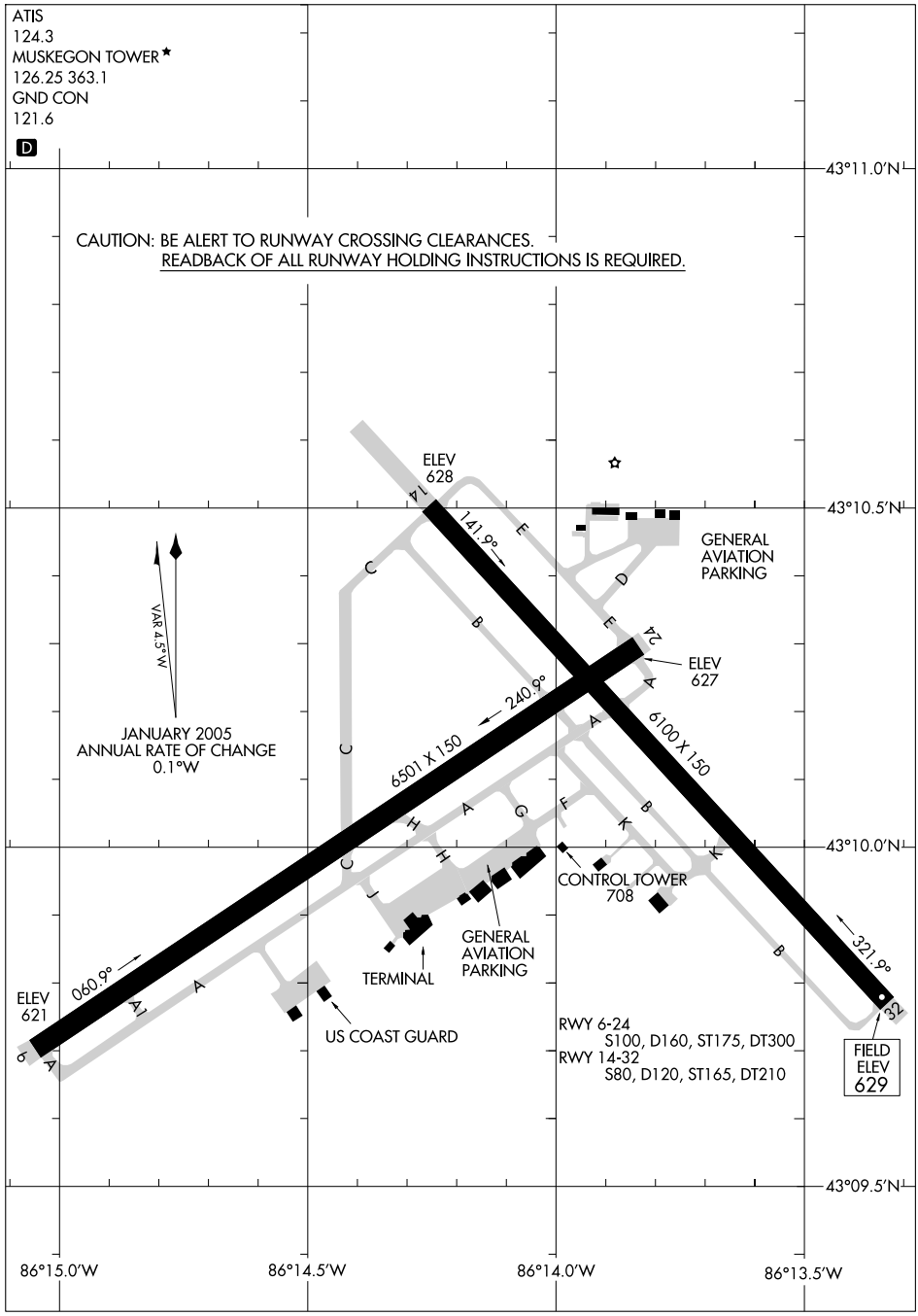
CATEGORY	A	B	C	D	E
S-19 *	1180/40	601 (600-¾)	1180/60 601 (600-1¼)	1180-1½ 601 (600-1½)	1180-1¾ 601 (600-1¾)
CIRCLING **	1180-1	600 (600-1)	1180-1¾ 600 (600-1¾)	1180-2 600 (600-2)	1200-2¼ 620 (700-2¼)

09295

AIRPORT DIAGRAM

AL-278 (FAA)

MUSKEGON COUNTY (MKG)
MUSKEGON, MICHIGAN



EC-1, 14 JAN 2010 to 11 FEB 2010

LOC I-MKG	APP CRS	Rwy ldg	6100
109.9	321°	TDZE	629
		Apt Elev	629

ILS or LOC RWY 32
MUSKEGON COUNTY (MKG)

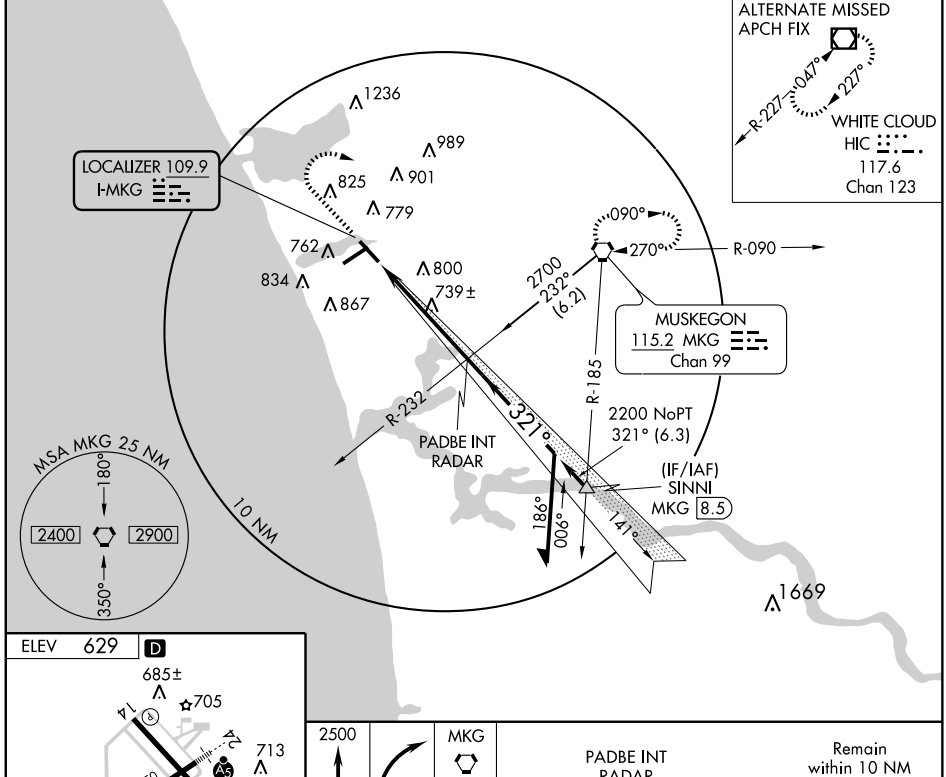
ASR

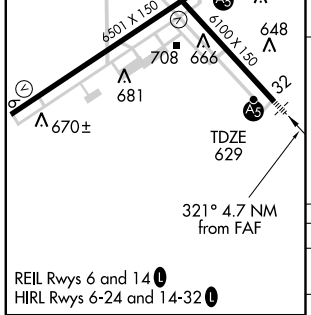
*RVR 1800 authorized with the use of FD or AP or HUD to DA. When local altimeter setting not received, use Fremont altimeter setting and increase DA 65 feet, and all MDA 80 feet, increase S-LOC Cat C visibility to RVR 4000, Cat D visibility to RVR 5000.

MALSR

MISSED APPROACH: Climb to 2500 then right turn direct MKG VORTAC and hold.

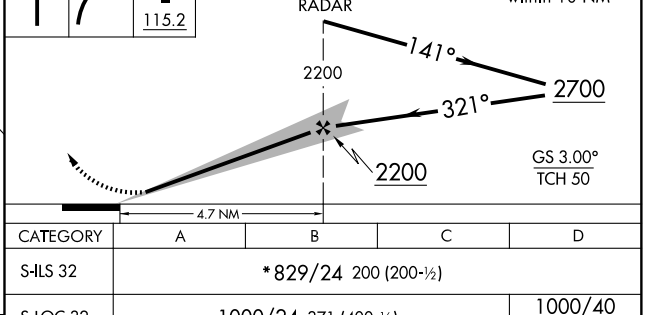
ATIS	MUSKEGON APP CON*	MUSKEGON TOWER*	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95





REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-ILS 32	*829/24 200 (200-½)			
S-LOC 32	1000/24 371 (400-½)			1000/40 371 (400-¾)
CIRCLING	1080-1 451 (500-1)		1140-1½ 511 (600-1½)	1180-2 551 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

ILS RWY 24
MUSKEGON COUNTY (MKG)

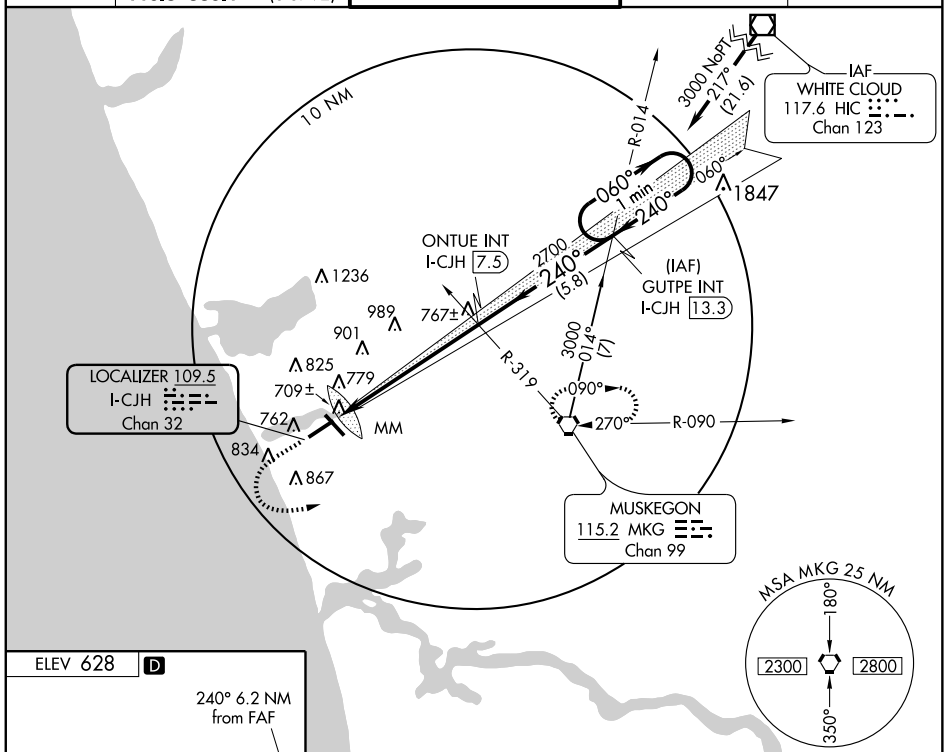
LOC/DME I-CJH	APP CRS	Rwy ldg	6501
109.5	240°	TDZE	627
Chan 32		Apt Elev	628

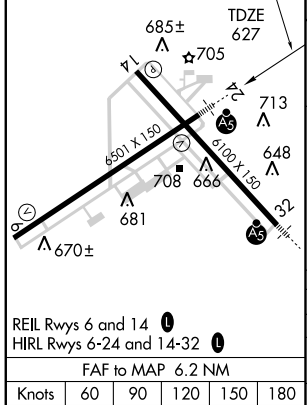
ASR

MALSR

MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

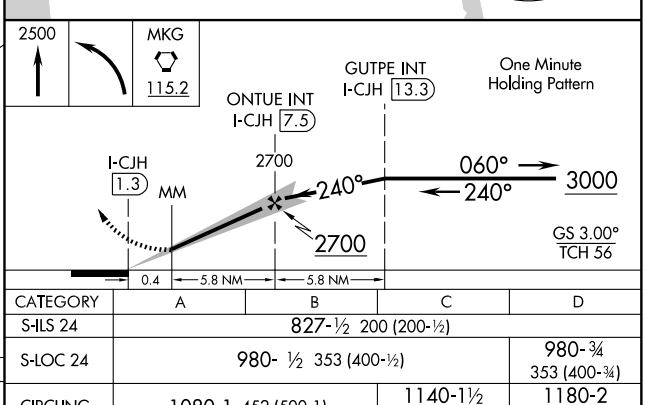
ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95





REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

FAF to MAP 6.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58



CATEGORY	A	B	C	D
S-ILS 24	827-½ 200 (200-½)			
S-LOC 24	980- ½ 353 (400-½)			980-¾ 353 (400-¾)
CIRCLING	1080-1 452 (500-1)		1140-1½ 512 (600-1½)	1180-2 552 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-MKG	APP CRS	Rwy ldg	6100
109.9	141°	TDZE	627
		Apt Elev	629

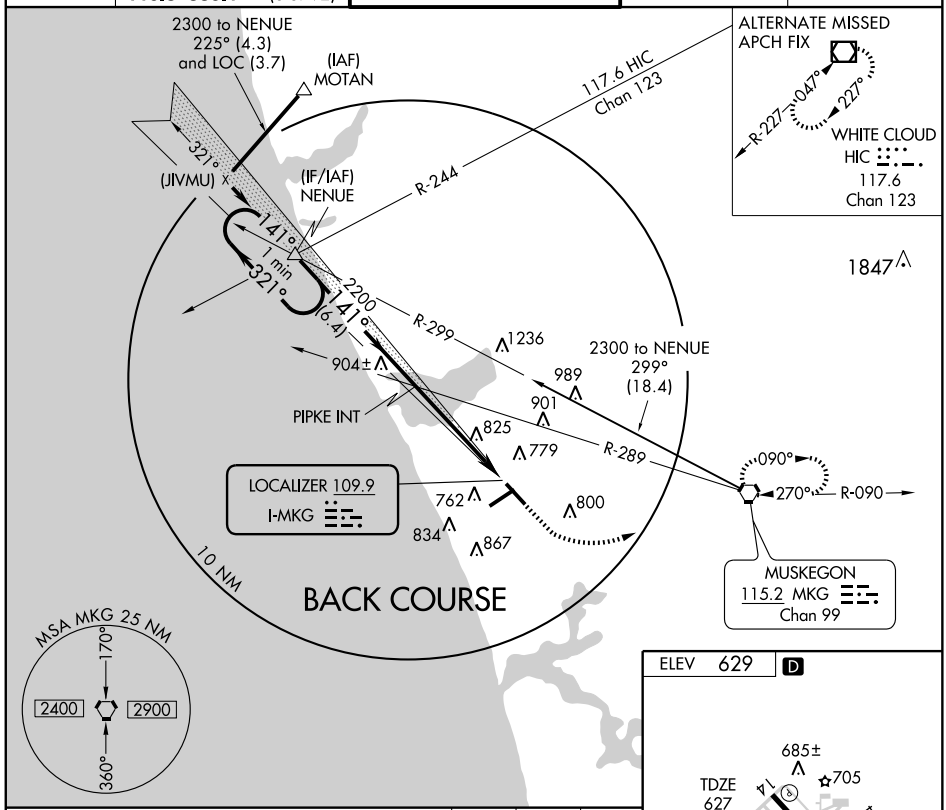
LOC BC RWY 14
MUSKEGON COUNTY (MKG)

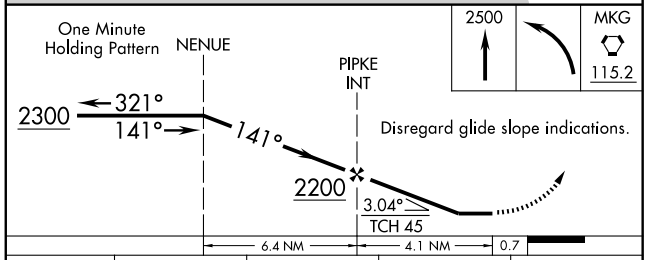
Visibility reduction by helicopters NA. When local altimeter setting not received, use Fremont altimeter setting and increase all MDA 80 feet.

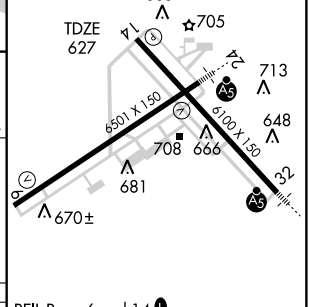
ASR

MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95







CATEGORY	A	B	C	D
S-14	1140-1 513 (600-1)		1140-1½ 513 (600-1½)	1140-1¾ 513 (600-1¾)
CIRCLING	1140-1 511 (600-1)		1140-1½ 511 (600-1½)	1180-2 551 (600-2)

REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

FAF to MAP 4.1 NM

Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6501
060°	TDZE	623
	Apt Elev	628

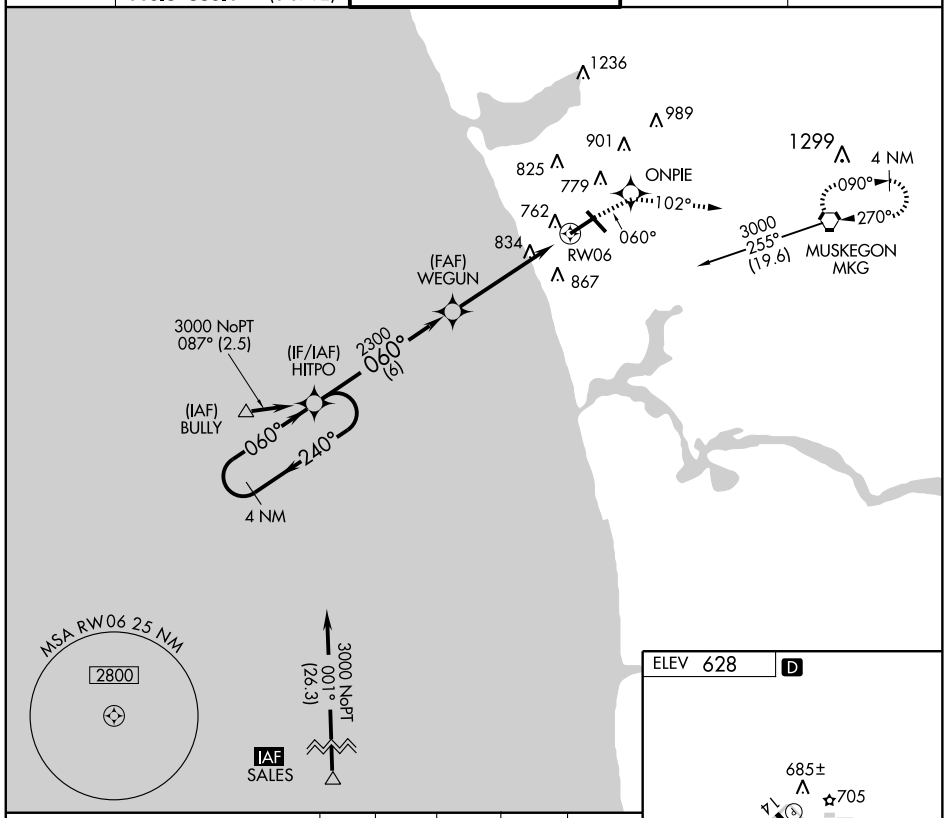
RNAV (GPS) RWY 6
MUSKEGON COUNTY (MKG)

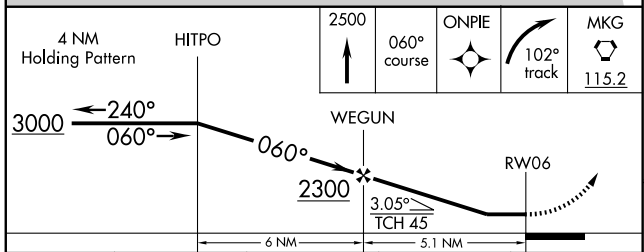
T
NA
ASR

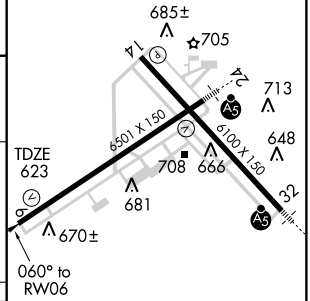
IAF ARM APPROACH MODE PRIOR TO IAF. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2500 via 060° course to ONPIE WP and right turn via 102° track to MKG VORTAC and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95







CATEGORY	A	B	C	D
LNAV MDA	1100-1 477 (500-1)		1100-1¼ 477(500-1¼)	1100-1½ 477(500-1½)
CIRCLING	1100-1 472 (500-1)		1140-1½ 512(600-1½)	1180-2 552(600-2)

REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

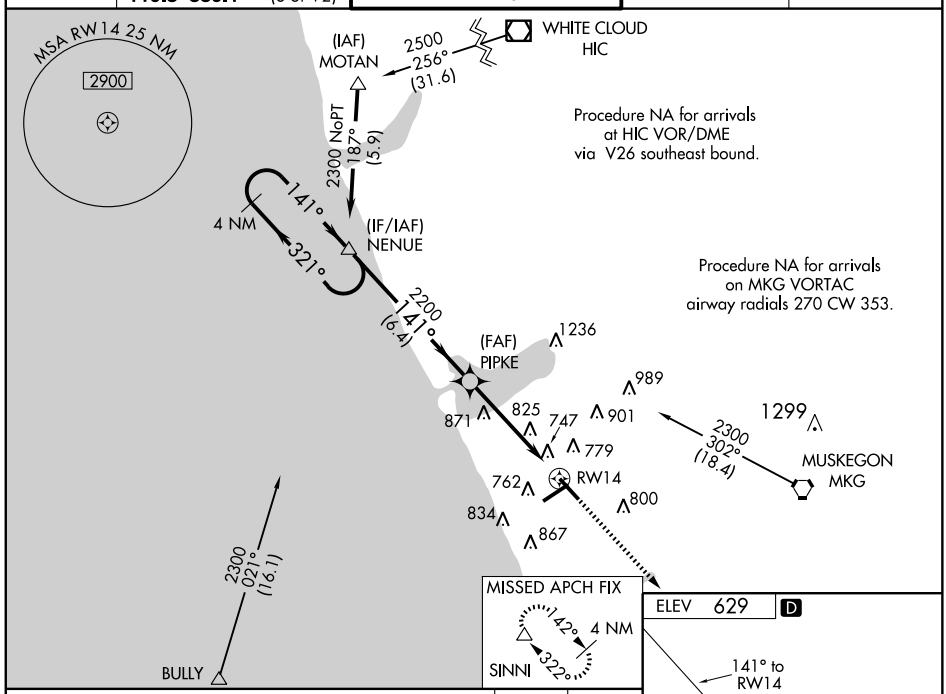
WAAS CH 69410 W14A	APP CRS 141°	Rwy ldg 6100 TDZE 627 Apt Elev 629

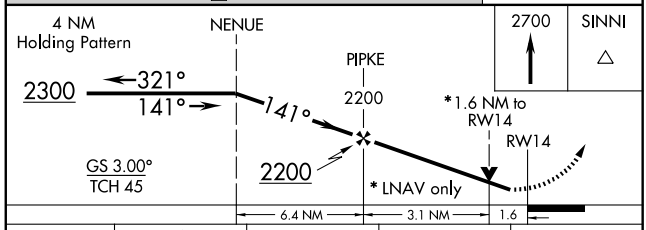
RNAV (GPS) RWY 14
MUSKEGON COUNTY (MKG)

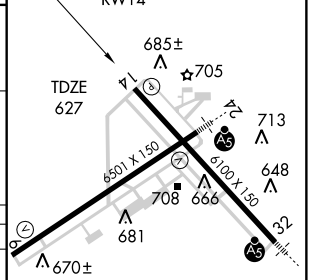
Baro-VNAV NA when using Fremont altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Fremont altimeter setting and increase all DA 65 feet and all MDA 80 feet, increase LPV all Cats, LNAV/VNAV all Cats, LNAV Cats C and D, and Circling Cat C visibility ¼ mile. VDP NA when using Fremont altimeter setting.

MISSED APPROACH: Climb to 2700 direct SINNI and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95







CATEGORY	A	B	C	D
LPV DA	877-¾ 250 (300-¾)			
LNAV/VNAV DA	1079-1½ 452 (500-1½)			
LNAV MDA	1180-1 553 (600-1)		1180-1½ 553 (600-1½)	1180-1¾ 553 (600-1¾)
CIRCLING	1180-1 551 (600-1)		1180-1½ 551 (600-1½)	1180-2 551 (600-2)

REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	6501
240°	TDZE	627
	Apt Elev	628

RNAV (GPS) RWY 24
MUSKEGON COUNTY (MKG)

T
A NA
ASR

BARO-VNAV NA below -16°C (4°F).
DME/DME RNP -0.3 NA.

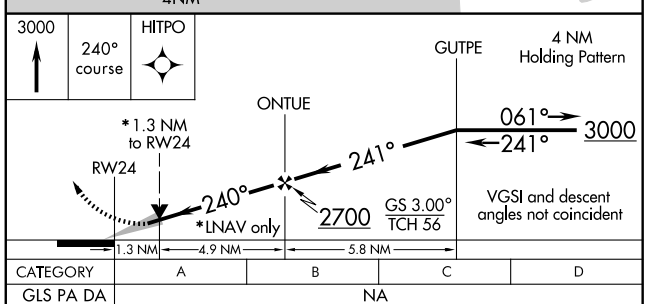
MALSR A5

MISSED APPROACH: Climb to 3000 via 240° course to HITPO WP and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95

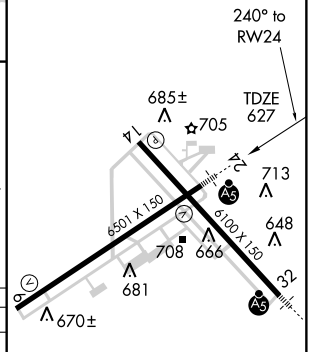
IAF ARM APPROACH MODE PRIOR TO IAF.

IAF WHITE CLOUD HIC
3000 NoPT 220° (21.6)
4 NM
061°
241°
1847
(IF/IAF) GUTPE
2700 241° (5.8)
(FAF) ONTUE
1236
989
901
825
779
240°
709±
762
RW24
834
867
3000 017° (7)
MUSKEGON MKG
MSA RW 24 25 NM
2800
3000 to GUTPE 063° (26.3)
BULLY
HITPO
060°
240°
4NM



CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/VNAV DA	1080-1 453 (500-1)			
LNAV MDA	1100-½ 473 (500-½)		1100-¾ 473 (500-¾)	1100-1 473 (500-1)
CIRCLING	1100-1½ 472 (500-1½)		1140-1½ 512 (600-1½)	1180-2 552 (600-2)

ELEV 628 D



REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 63010 W32A	APP CRS 321°	Rwy ldg 6100 TDZE 629 Apt Elev 629

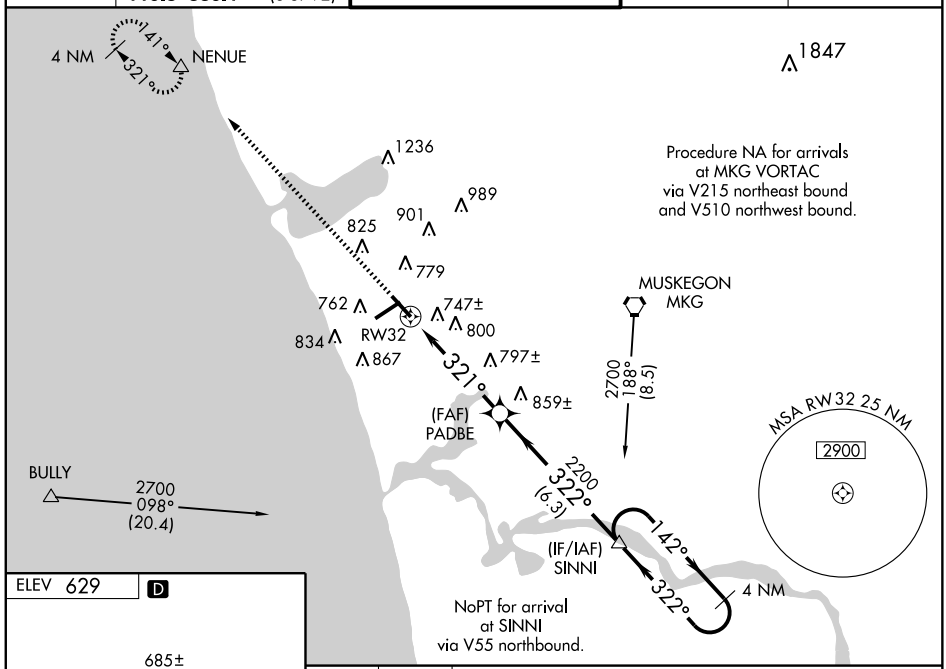
RNAV (GPS) RWY 32
MUSKEGON COUNTY (MKG)

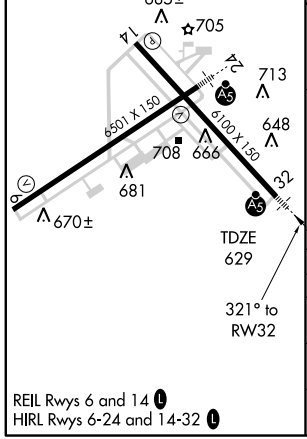
For inoperative MALSR, increase LPV all Cats visibility to RVR 5000. Baro-VNAV NA when using Fremont altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fremont altimeter setting and increase all DA 65 feet, all MDA 80 feet, increase LPV all Cats visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 6000, LNAV Cat C visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000. VDP NA when using Fremont altimeter setting.

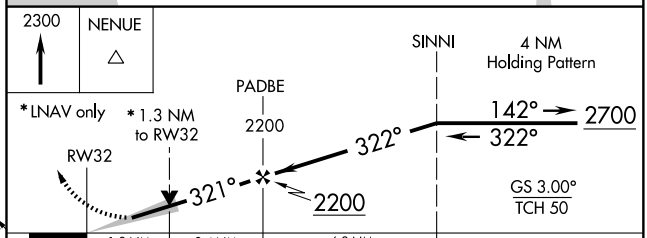
MALSR

MISSED APPROACH: Climb to 2300 direct NENUE and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95







CATEGORY	A	B	C	D
LPV DA	913/24 284 (300-½)			
LNAV/VNAV DA	1029/50 400 (400-1)			
LNAV MDA	1100/24 471 (500-½)		1100/40 471 (500-¾)	1100/50 471 (500-1)
CIRCLING	1100-1 471 (500-1)		1140-1½ 511 (600-1½)	1180-2 551 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

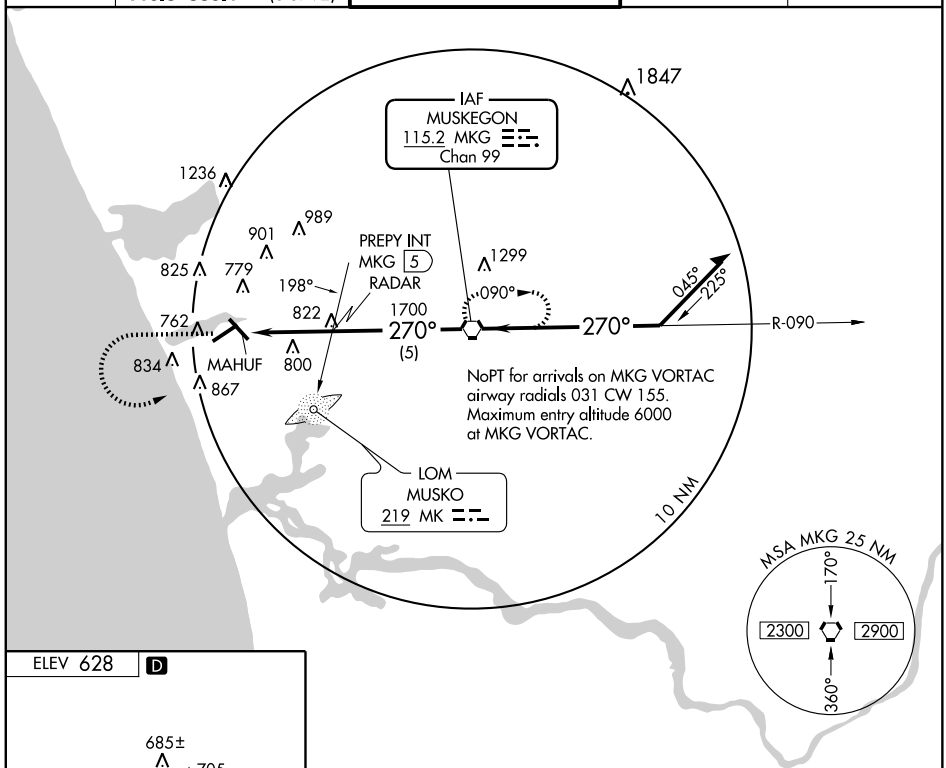
VORTAC MKG 115.2 Chan 99	APP CRS 270°	Rwy ldg N/A TDZE N/A Apt Elev 628

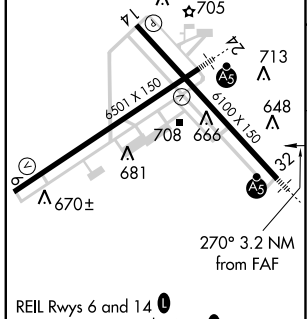
VOR-A
MUSKEGON COUNTY (MKG)

ADF, DME or RADAR REQUIRED.
If local altimeter setting not received, use Tulip City altimeter setting and increase all MDAs 80 feet.
ASR

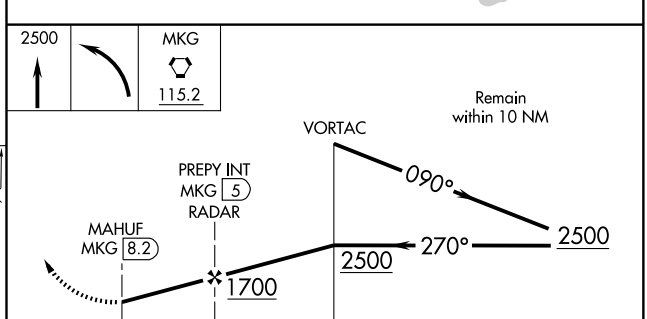
MISSED APPROACH: Climb to 2500 then left turn direct MKG VORTAC and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95





REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L



FAF to MAP 3.2 NM					
Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04

CATEGORY	A	B	C	D
CIRCLING	1100-1 472 (500-1)		1180-1½ 552 (600-1½)	1220-2 592 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

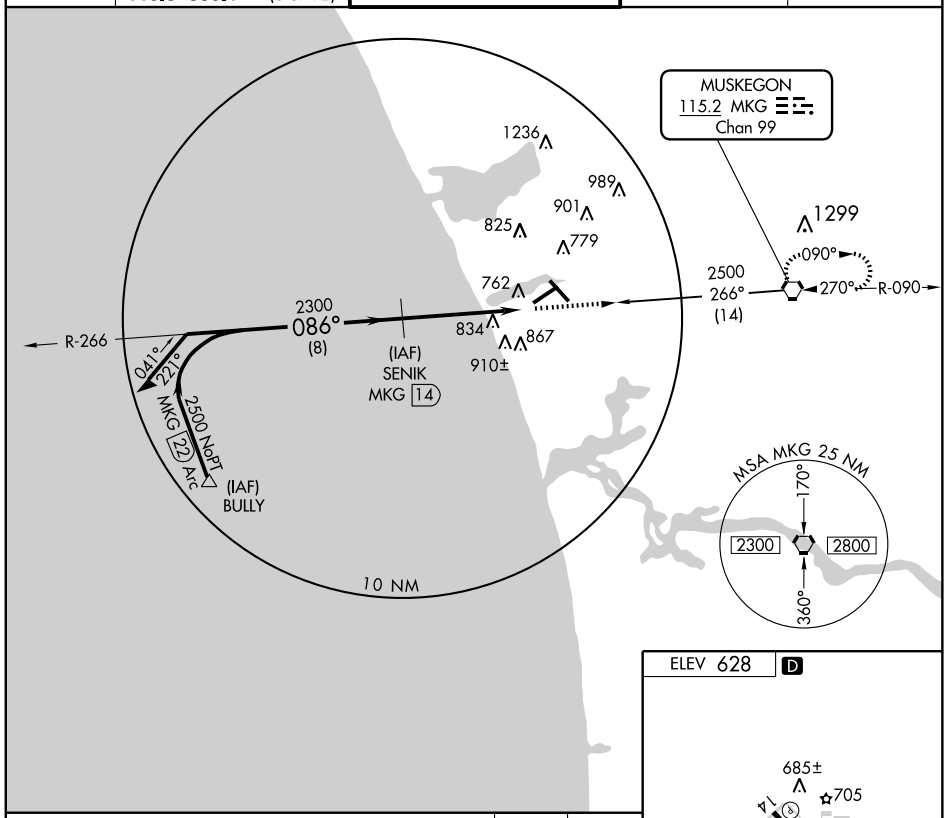
VORTAC MKG	APP CRS	Rwy ldg	6501
115.2	086°	TDZE	623
Chan 99		Apt Elev	628

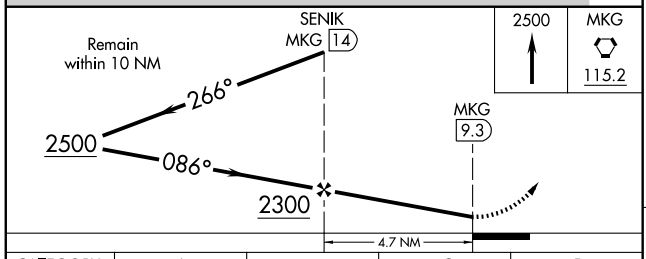
VOR/DME RWY 6
MUSKEGON COUNTY (MKG)

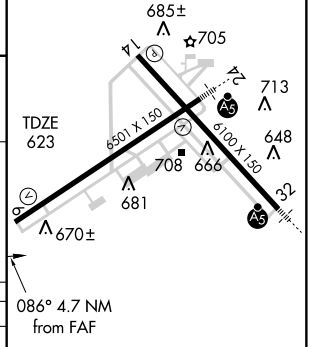
ASR

MISSED APPROACH: Climb to 2500 direct MKG VORTAC and hold.

ATIS	MUSKEGON APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	118.2 339.1 (N of V2) 119.8 339.1 (S of V2)	126.25 (CTAF) L 363.1	121.6	122.95







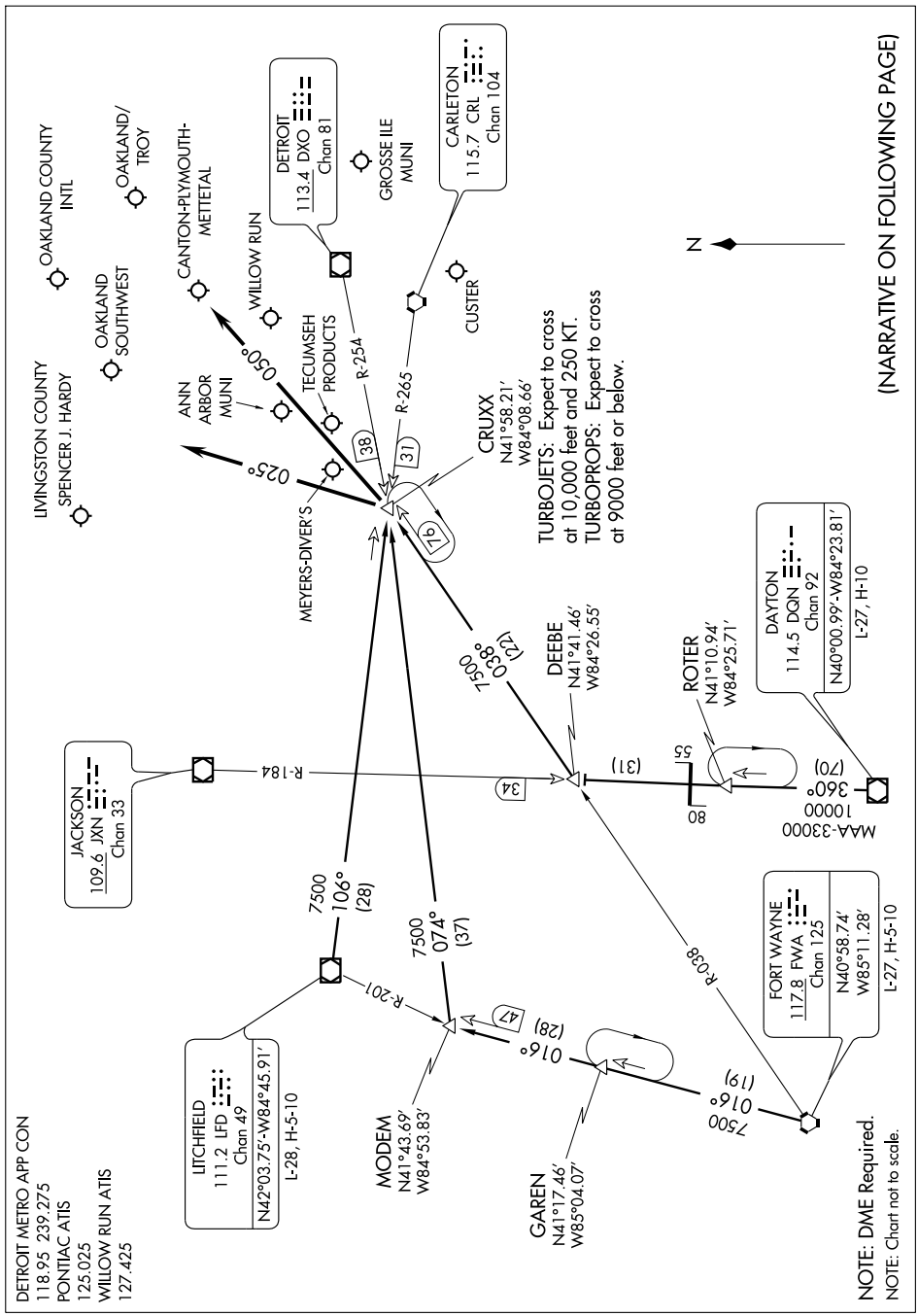
CATEGORY	A	B	C	D
S-6	1160-1 537 (600-1)		1160-1½ 537 (600-1½)	1160-1¾ 537 (600-1¾)
CIRCLING	1160-1 532 (600-1)		1160-1½ 532 (600-1½)	1220-2 592 (600-2)

REIL Rwys 6 and 14 L
HIRL Rwys 6-24 and 14-32 L

EC-1. 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

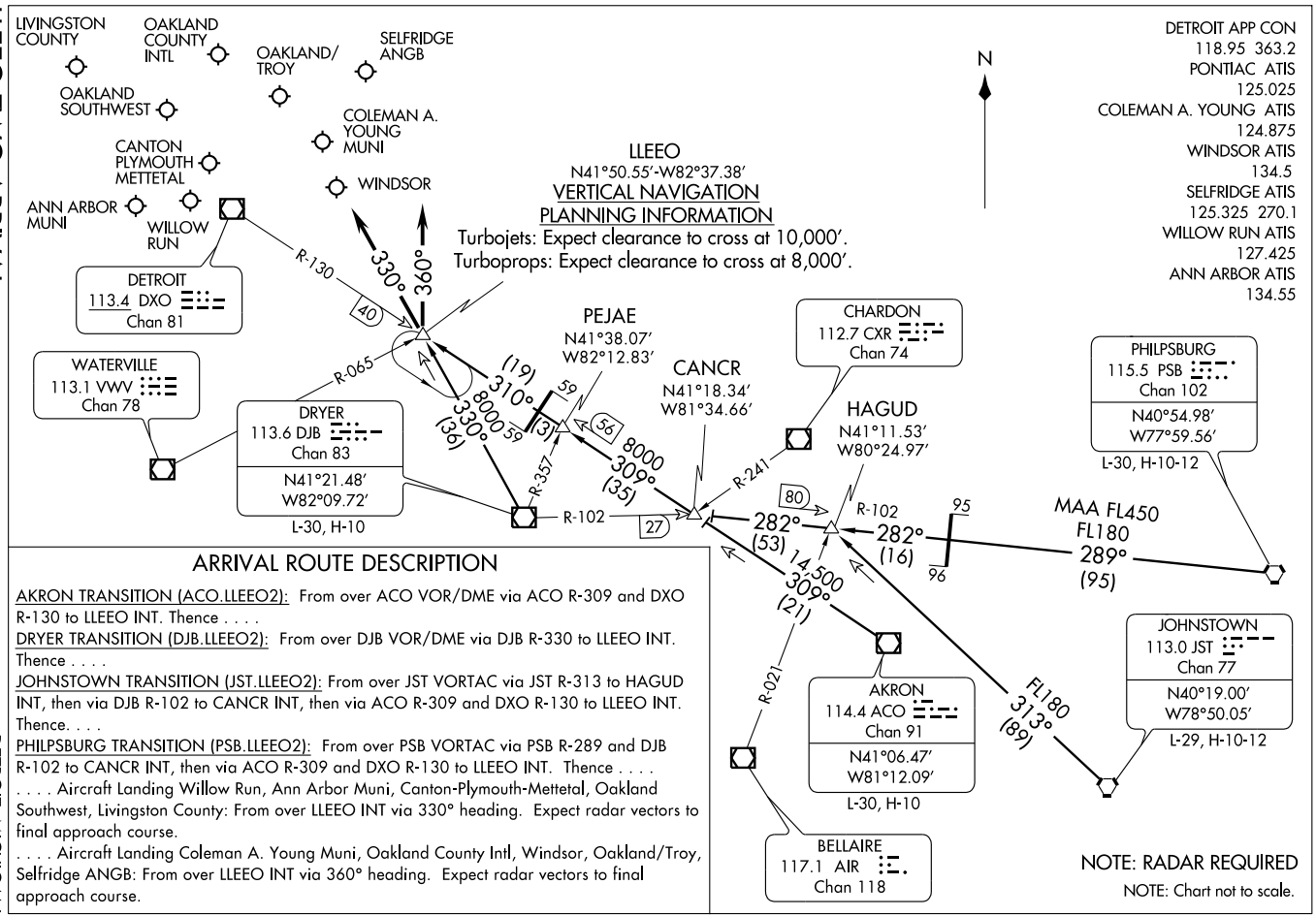
ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

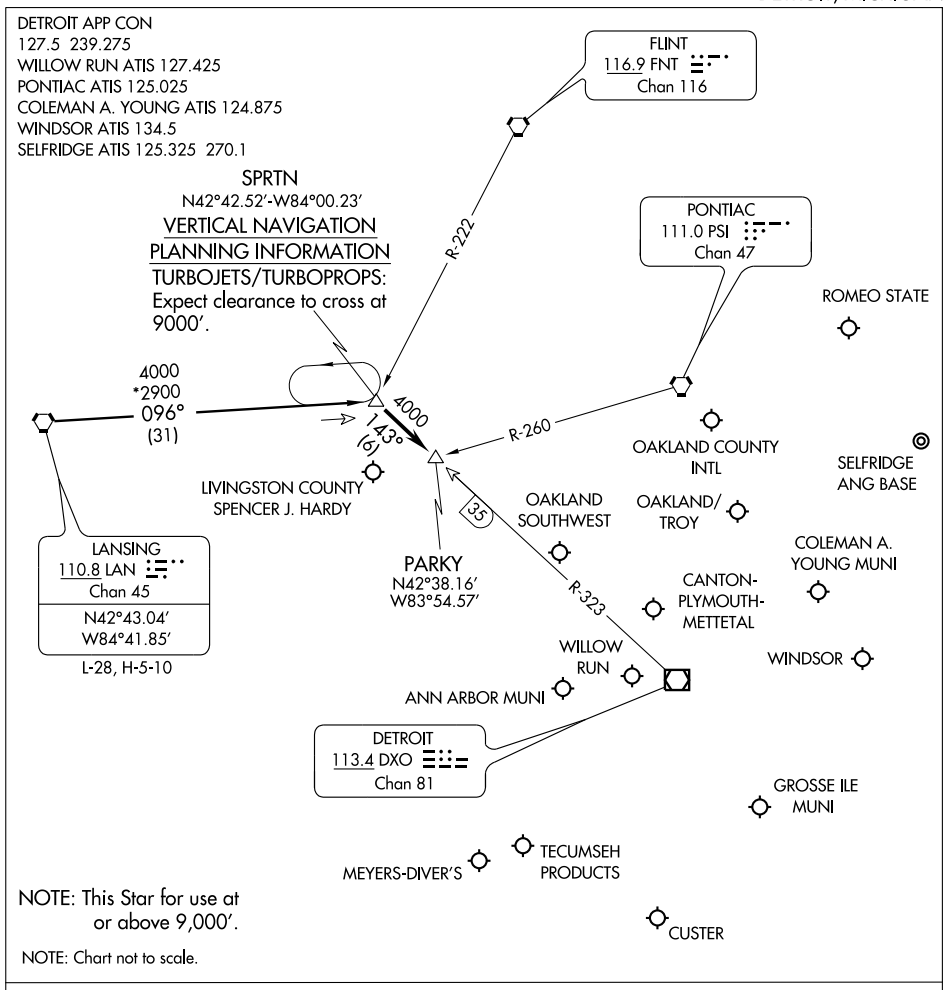
. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

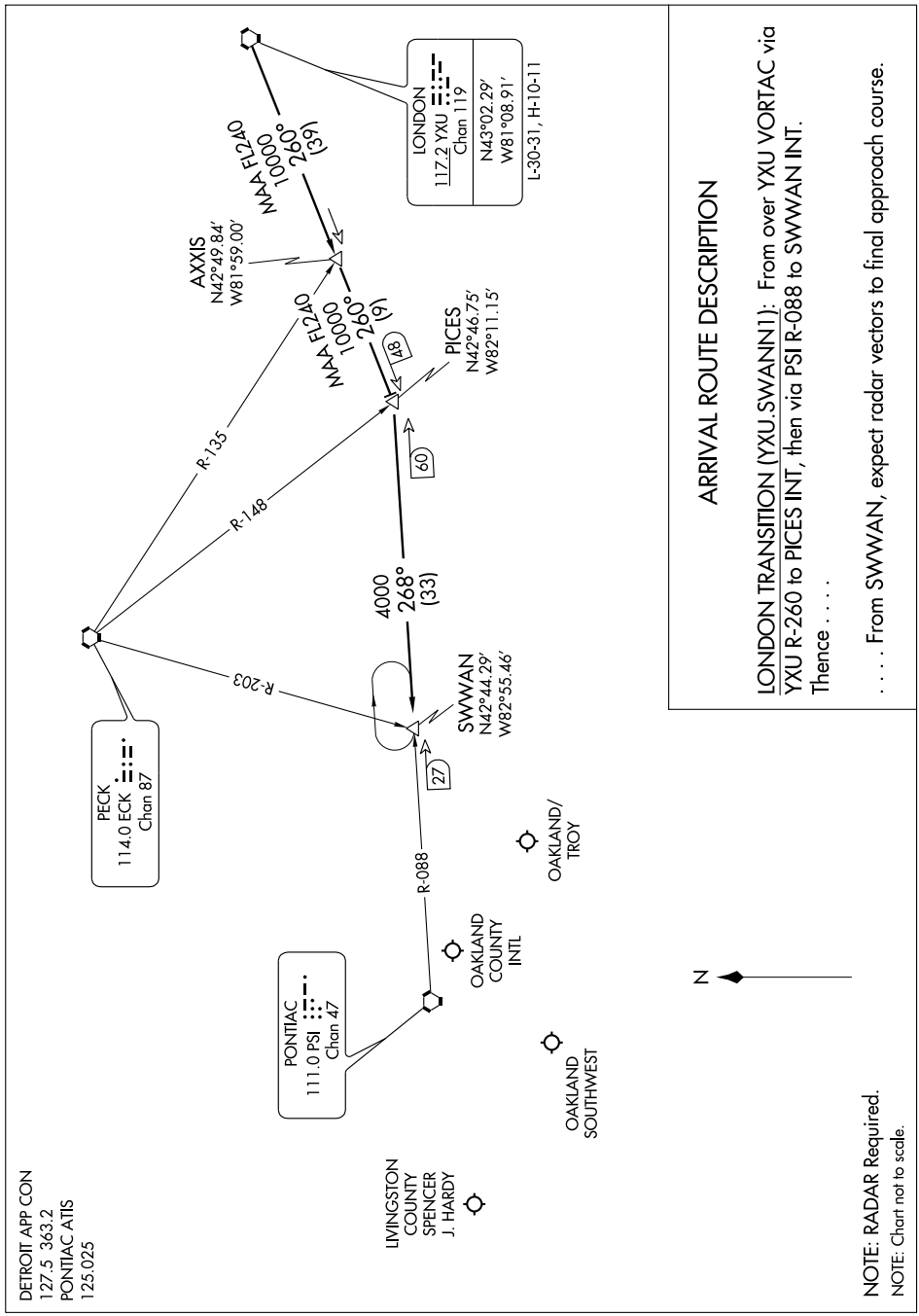
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

SWWAN ONE ARRIVAL

PONTIAC, MICHIGAN



VORTAC SVM	APP CRS	Rwy Idg	N/A
114.3	350°	TDZE	N/A
Chan 90		Apt Elev	926

VOR or GPS-A

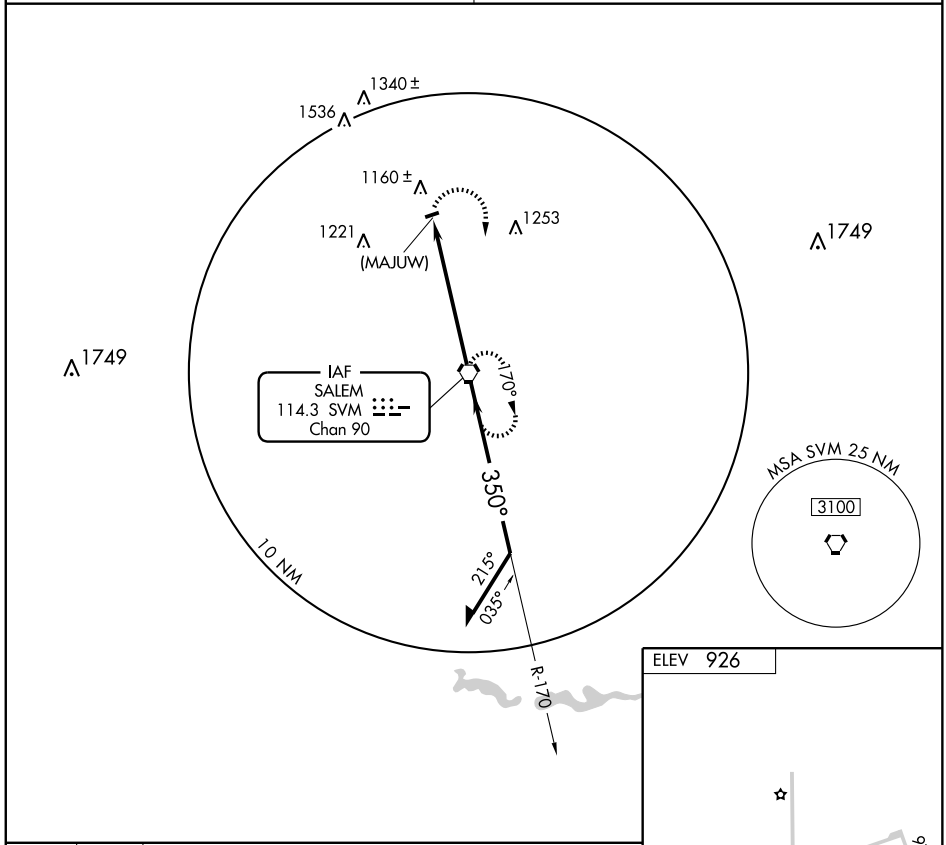
NEW HUDSON / OAKLAND SOUTHWEST (Y47)

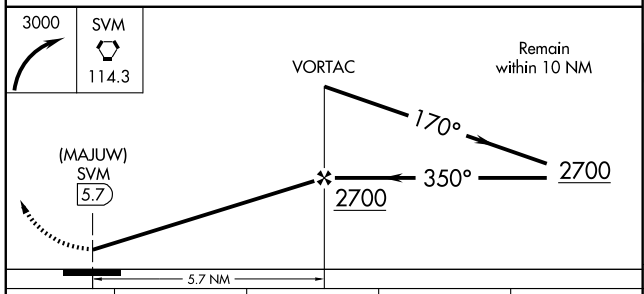
NA

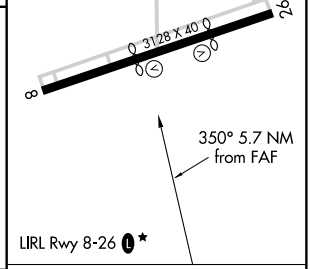
Use Detroit Willow Run airport altimeter setting.
Night visibility minimums 2 miles.

MISSED APPROACH: Climbing right turn to 3000 direct SVM VORTAC and hold.

DETROIT APP CON	UNICOM
127.5 363.2	122.7 (CTAF) L★







FAF to MAP 5.7 NM

CATEGORY	A	B	C	D
CIRCLING	1520-1 594 (600-1)		NA	

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

EC-1. 14 JAN 2010 to 11 FEB 2010

NEWBERRY, MICHIGAN

AL-5836 (FAA)

VOR/DME ERY	APP CRS	Rwy ldg	4304
108.2	127°	TDZE	871
Chan 19		Apt Elev	871

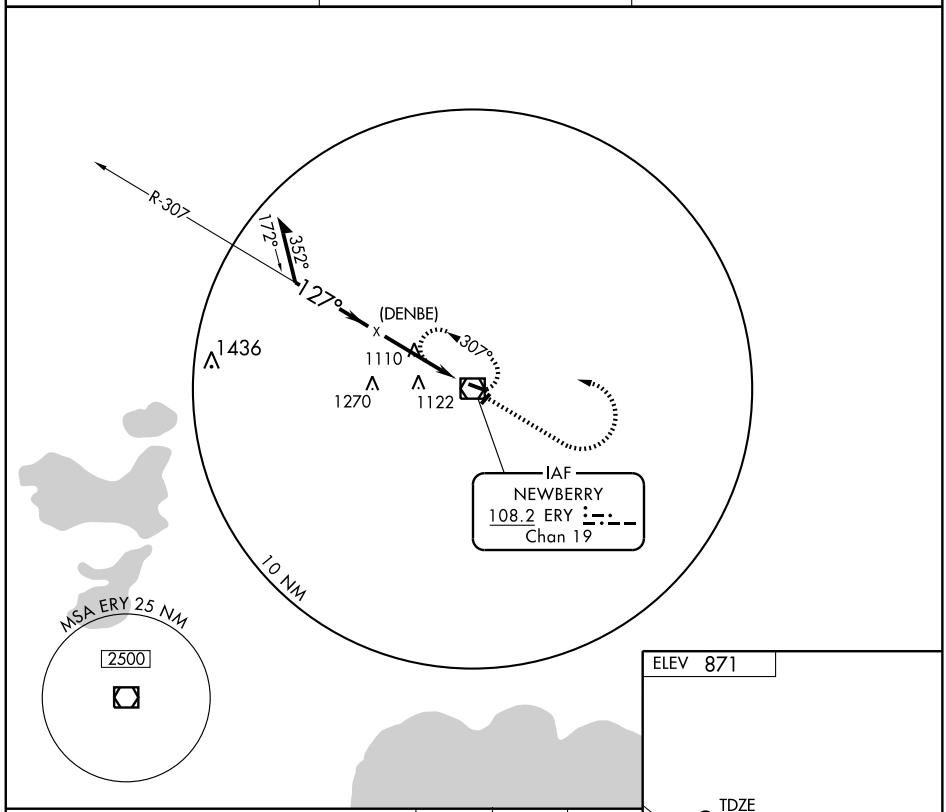
VOR or GPS RWY 11

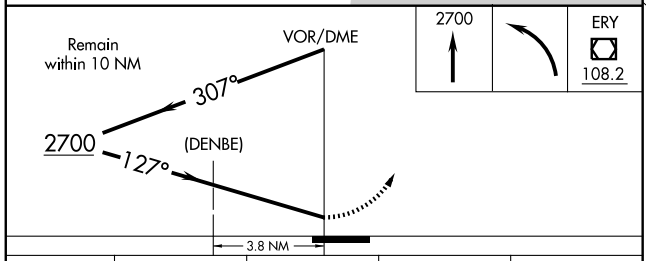
NEWBERRY/LUCE COUNTY (ERY)

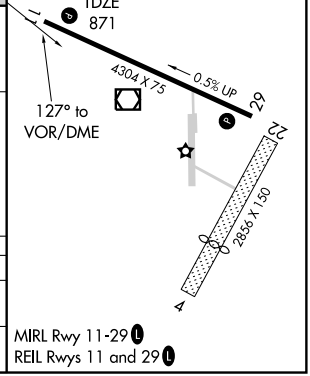
NA

MISSED APPRAOCH: Climb to 2700 then left turn direct ERY VOR/DME and hold.

AWOS-3	GREEN BAY RADIO	UNICOM
108.2	122.4	122.8 (CTAF) L







CATEGORY	A	B	C	D
S-11	1480-1	609 (700-1)	1480-1¾ 609 (700-1¾)	1480-2 609 (700-2)
CIRCLING	1480-1	609 (700-1)	1480-1¾ 609 (700-1¾)	1480-2 609 (700-2)

MIRL Rwy 11-29 L

REIL Rwys 11 and 29 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ERY	APP CRS	Rwy ldg	4304
108.2	289°	TDZE	869
Chan 19		Apt Elev	871

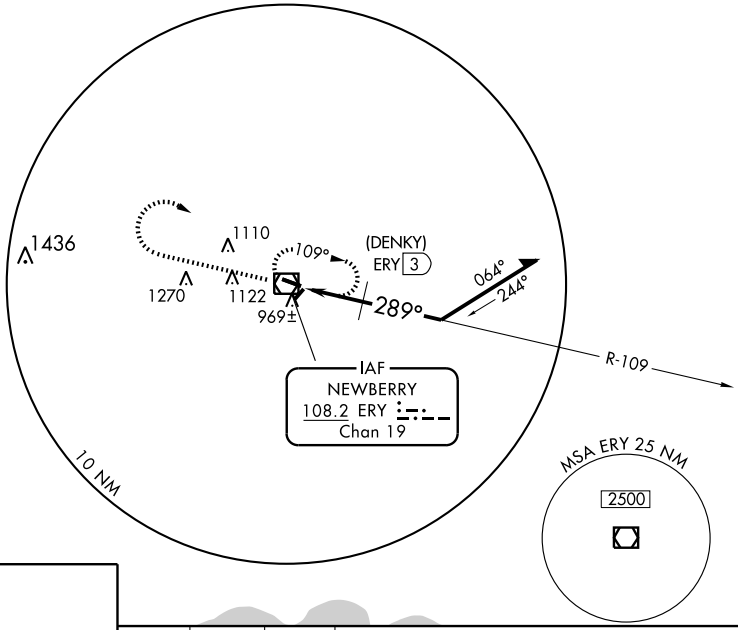
VOR or GPS RWY 29

NEWBERRY/LUCE COUNTY (ERY)

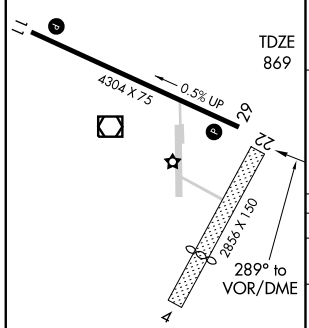
NA

MISSED APPRAOCH: Climb to 2400 then right turn direct ERY VOR/DME and hold.

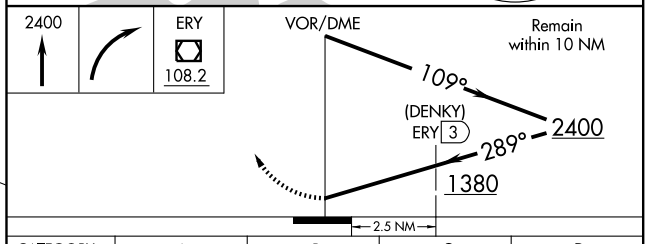
AWOS-3	GREEN BAY RADIO	UNICOM
108.2	122.4	122.8 (CTAF) L



ELEV 871



MIRL Rwy 11-29 L
REIL Rwys 11 and 29 L



CATEGORY	A	B	C	D
S-29	1380-1 511 (600-1)		1380-1½ 511 (600-1½)	
CIRCLING	1380-1 509 (600-1)		1380-1½ 509 (600-1½)	1480-2 609 (700-2)
DME MINIMUMS				
S-29	1220-1 351 (400-1)			1220-1¼ 351 (400-1¼)
CIRCLING	1280-1 409 (500-1)	1340-1 469 (500-1)	1340-1½ 469 (500-1½)	1480-2 609 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC GIJ	APP CRS	Rwy ldg	2415
115.4	046°	TDZE	743
Chan 101		Apt Elev	750

VOR or GPS RWY 3

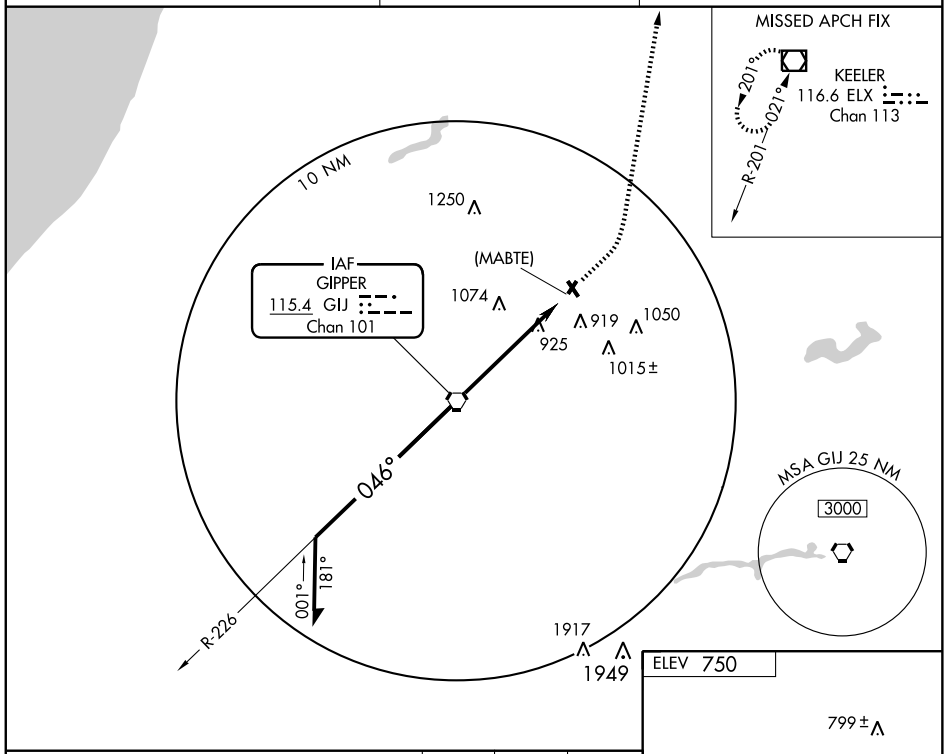
NILES / JERRY TYLER MEMORIAL (3TR)

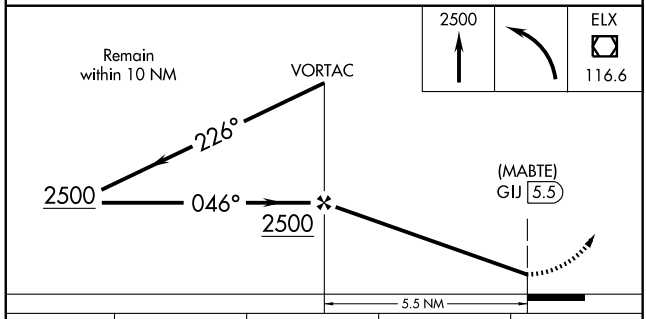
Use South Bend altimeter setting.
Straight-in minimums not authorized at night.

NA

MISSED APPROACH: Climb to 2500, then left turn direct ELX VOR/DME and hold.

SOUTH BEND APP CON ★	GCO	UNICOM
118.55 257.8	121.725	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-3	1200-1	457 (500-1)	1200-1¼ 457 (500-1¼)	1200-1½ 457 (500-1½)
CIRCLING	1300-1	557 (600-1)	1300-1½ 557 (600-1½)	1460-2¼ 717 (800-2¼)

FAF to MAP 5.5 NM

Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC GIJ	APP CRS	Rwy ldg	2565
115.4	225°	TDZE	743
Chan 101		Apt Elev	750

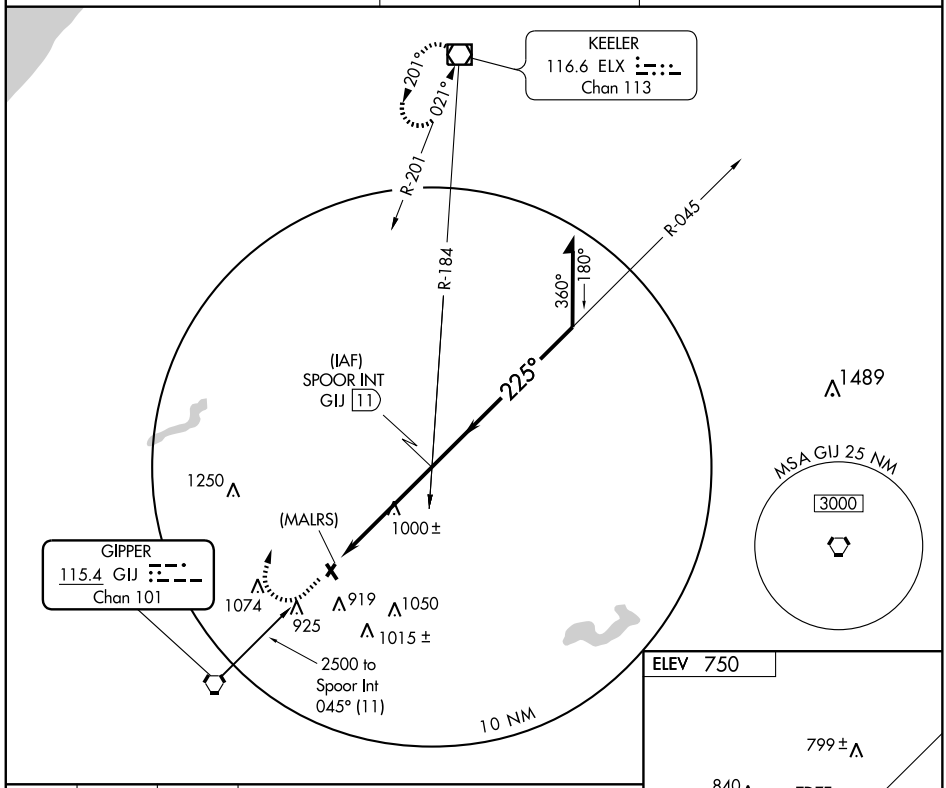
VOR or GPS RWY 21

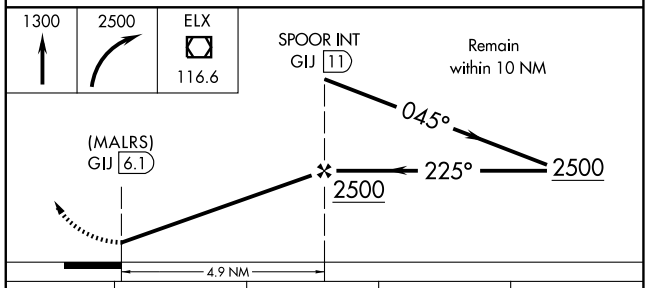
NILES / JERRY TYLER MEMORIAL (3TR)

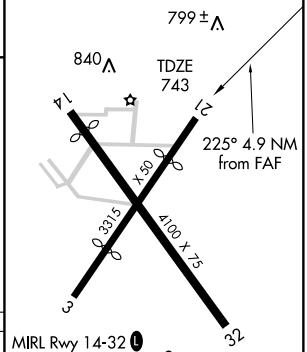
Use South Bend altimeter setting.
NA Straight-in minimums not authorized at night.

MISSED APPROACH: Climb to 1300, then climbing right turn to 2500 direct ELX VOR/DME and hold.

SOUTH BEND APP CON ★	GCO	UNICOM
118.55 257.8	121.725	122.8 (CTAF) L







MIRL Rwy 14-32 L
REIL Rwys 14 and 32 L

CATEGORY	A	B	C	D
S-21	1280-1 537 (600-1)		1280-1½ 537 (600-1½)	1280-1¾ 537 (600-1¾)
CIRCLING	1300-1 557 (600-1)		1300-1½ 557 (600-1½)	1460-2¼ 717 (800-2¼)

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB OGM	APP CRS	Rwy ldg	N/A
375	222°	TDZE	N/A
		Apt Elev	669

NDB or GPS-A

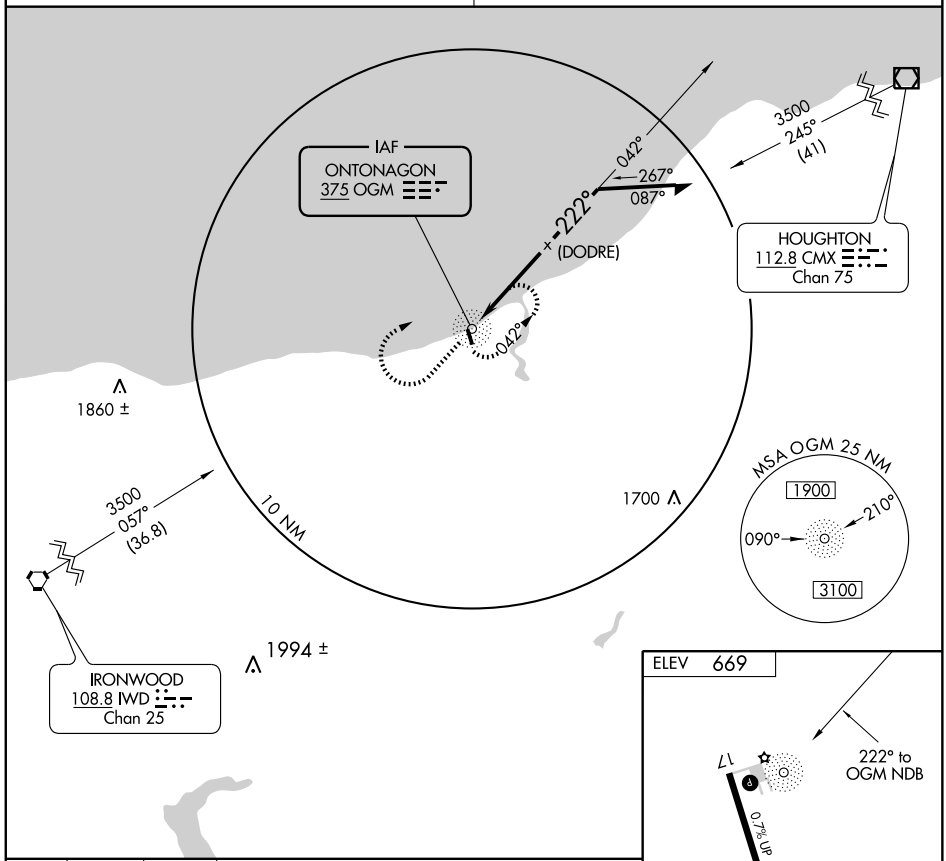
ONTONAGON COUNTY - SCHUSTER FIELD (OGM)

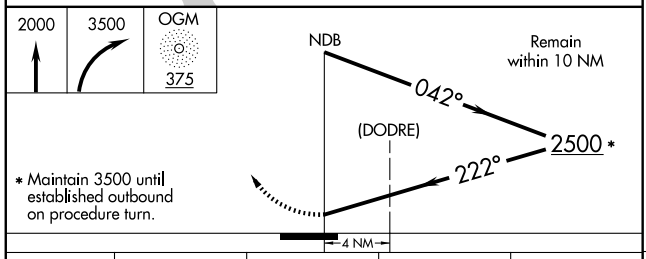
Use Houghton altimeter setting, if not received procedure not authorized.

NA

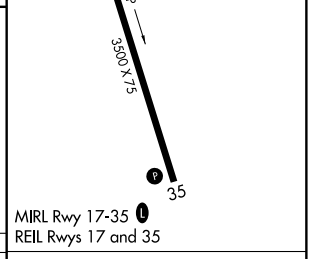
MISSED APPROACH: Climb to 2000, then climbing right turn to 3500 direct OGM NDB and hold.

MINNEAPOLIS CENTER	(CTAF)
127.2 379.1	122.9 L





* Maintain 3500 until established outbound on procedure turn.



MIRL Rwy 17-35 L
REIL Rwys 17 and 35

CATEGORY	A	B	C	D
CIRCLING	1420-1 751 (800-1)	1420-1¼ 751 (800-1¼)	1420-2¼ 751 (800-2¼)	NA

Knots	60	90	120	150	180
Min:Sec					

LOC I-LJU	APP CRS	Rwy ldg	11,800
108.5	245°	TDZE	624
		Apt Elev	634

ILS or LOC/DME RWY 24

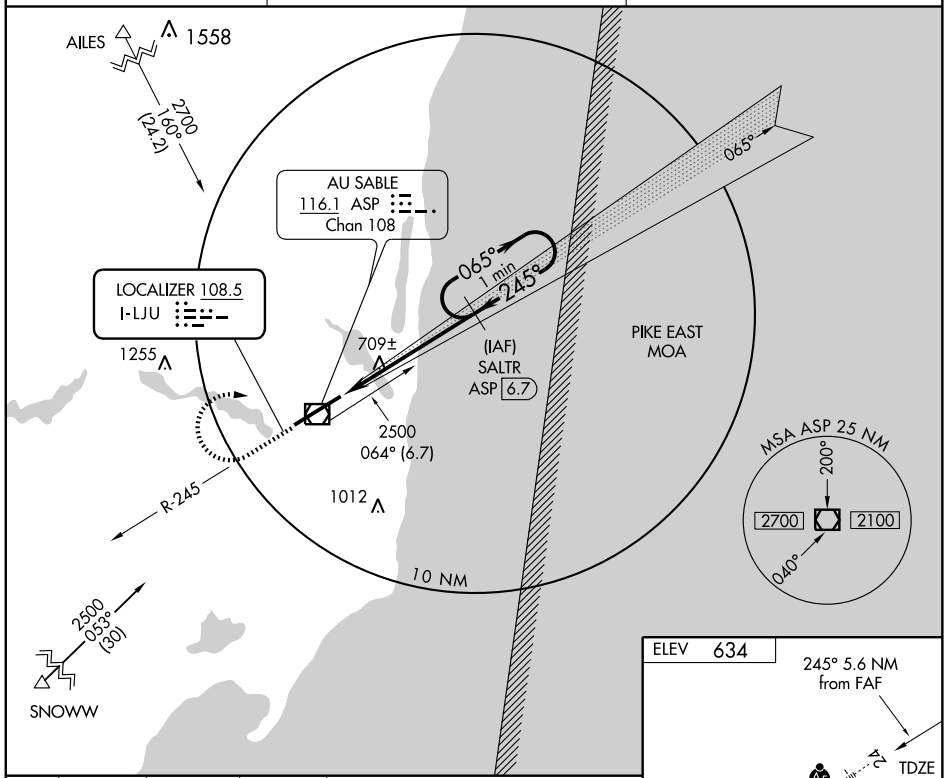
OSCODA-WURTSMITH (OSC)

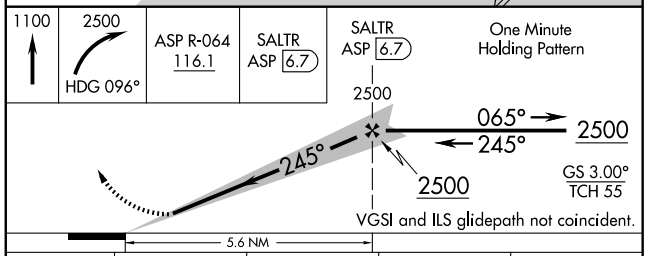
Circling NA SouthEast of Rwy 6-24.
DME from ASP VOR/DME.
NA Simultaneous reception of I-LJU and ASP DME required.
For inoperative MALSR, increase S-LOC 24 Cat D visibility to 1.

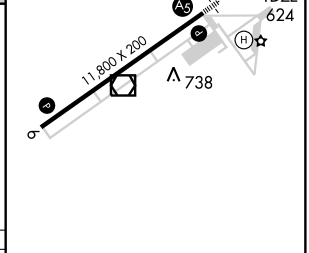
MALSR A5

MISSED APPROACH: Climb to 1100 then climbing right turn to 2500 via heading 096° and ASP R-064 to SALTR and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
116.1	118.525 251.15	123.0 (CTAF) L







HIRL Rwy 6-24 L

CATEGORY	A	B	C	D
S-ILS 24	824-½ 200 (200-½)			
S-LOC 24	960-½ 336 (400-½)			960-¾ 336 (400-¾)
CIRCLING	1140-1 506 (600-1)		1140-1½ 506 (600-1½)	1200-2 566 (600-2)

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1. 14 JAN 2010 to 11 FEB 2010

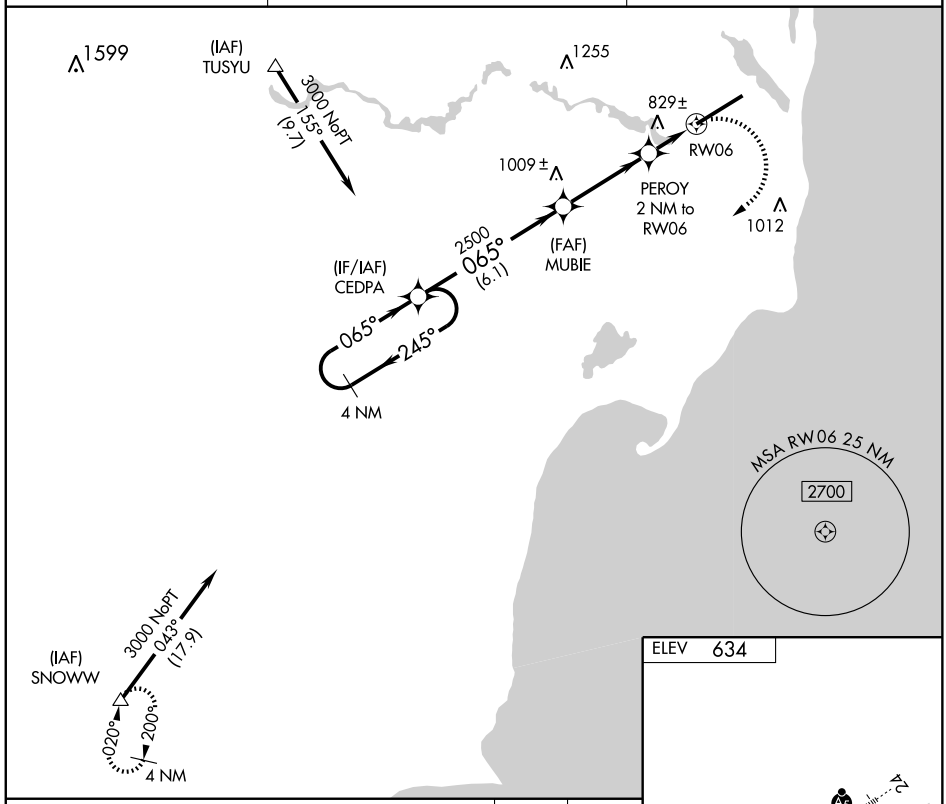
APP CRS	Rwy ldg	11,800
065°	TDZE	634
	Apt Elev	634

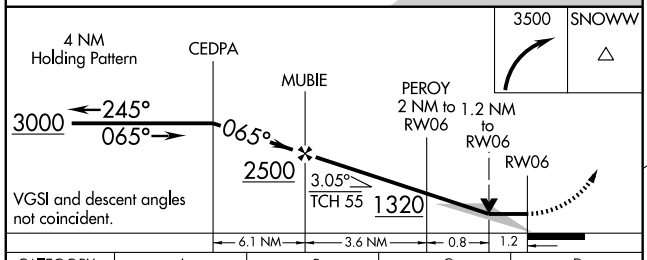
RNAV (GPS) RWY 6
OSCODA-WURTSMITH (OSC)

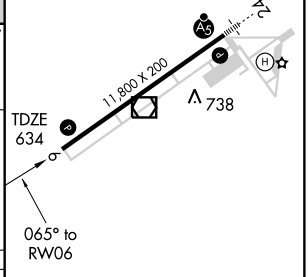
Circling NA southeast of Rwy 6-24. DME/DME RNP-0.3 NA. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet, increase visibility for LNAV Cats C and D and Circling Cat C ¼ mile.

MISSED APPROACH: Climbing right turn to 3500 direct SNOWW and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
116.1	118.525 251.15	123.0 (CTAF)







CATEGORY	A	B	C	D
LNAV MDA	1080-1 446 (500-1)		1080-1¼ 446 (500-1¼)	1080-1½ 446 (500-1½)
CIRCLING	1140-1 506 (600-1)		1140-1½ 506 (600-1½)	1200-2 566 (600-2)

HIRL Rwy 6-24

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME ASP	APP CRS	Rwy ldg	11,800
116.1	070°	TDZE	634
Chan 108		Apt Elev	634

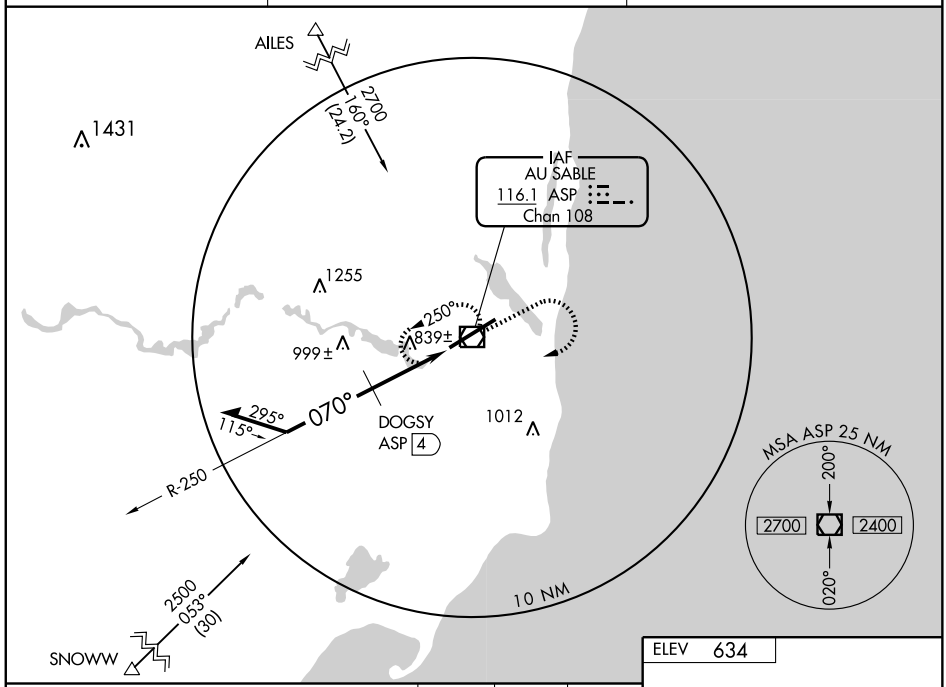
VOR RWY 6
OSCODA-WURTSMITH (OSC)

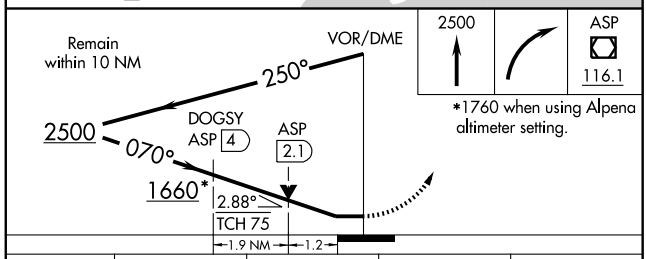
Circling NA southeast of Rwys 6 and 24. VDP NA when using Alpena altimeter setting. When local altimeter setting not received, use Alpena altimeter setting and increase all MDAs 100 feet and DOGSY Fix minimums visibility S-6/Circling Cat C ¼ mile, S-6 Cat D ¼ mile.

NA

MISSED APPROACH: Climb to 2500 then right turn direct ASP VOR/DME and hold.

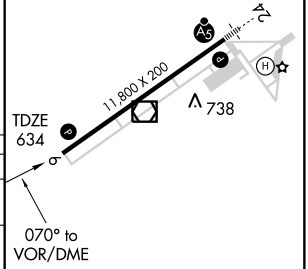
AWOS-3	MINNEAPOLIS CENTER	UNICOM
116.1	118.525 251.15	123.0 (CTAF) L





CATEGORY	A	B	C	D
S-6	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3 1026 (1100-3)	
CIRCLING	1660-1¼ 1026 (1100-1¼)	1660-1½ 1026 (1100-1½)	1660-3 1026 (1100-3)	
DOGSY FIX MINIMUMS				
S-6	1100-1 466 (500-1)		1100-1¼ 466 (500-1¼)	1100-1½ 466 (500-1½)
CIRCLING	1140-1 506 (600-1)		1140-1½ 506 (600-1½)	1200-2 566 (600-2)

ELEV 634



HIRL Rwy 6-24 L

EC-1. 14 JAN 2010 to 11 FEB 2010

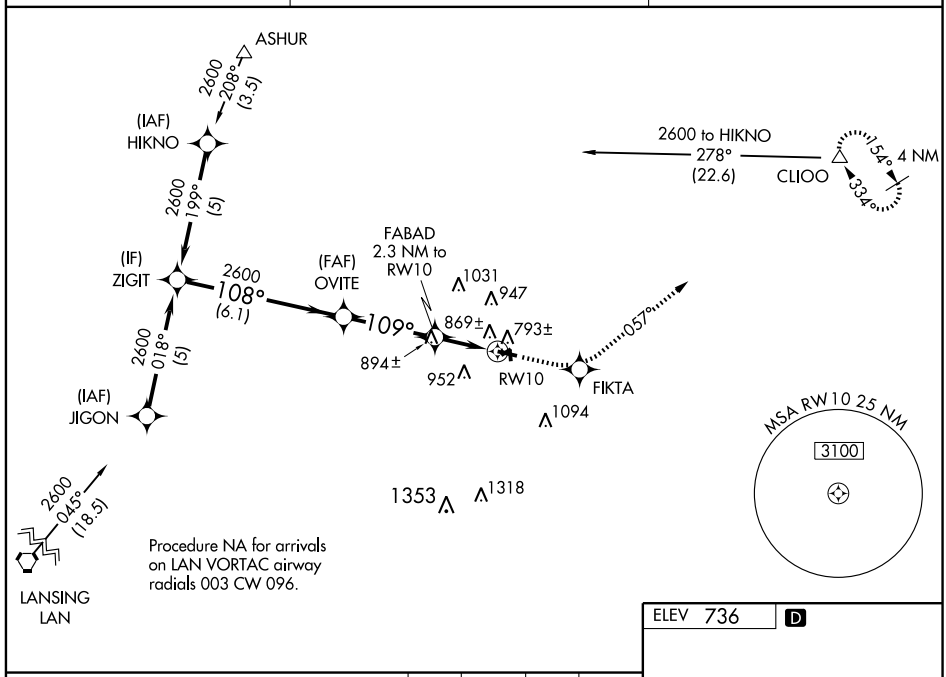
WAAS CH 50209 W10A	APP CRS 109°	Rwy ldg 4300 TDZE 736 Apt Elev 736

RNAV (GPS) RWY 10
OWOSSO COMMUNITY (RNP)

Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all DA 47 feet and LPV visibility ¼ mile all Cats, increase all MDA 60 feet and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Flint altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16C° (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

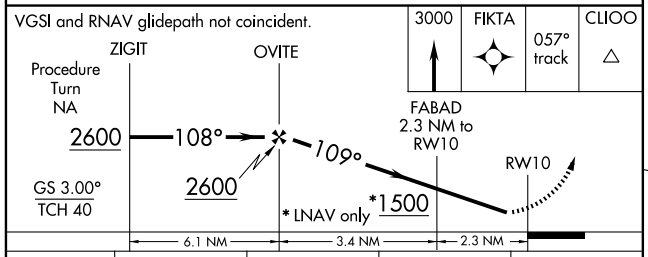
MISSED APPROACH: Climb to 3000 direct FIKTA and via 057° track to CLIOO and hold.

AWOS-3	FLINT APP CON	UNICOM
118.025	118.8 257.9	123.0 (CTAF) L



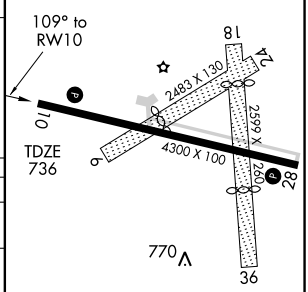
Procedure NA for arrivals on LAN VORTAC airway radials 003 CW 096.

VGSI and RNAV glidepath not coincident.



CATEGORY	A	B	C	D
LPV DA	1079-1¼ 343 (400-1¼)			NA
LNAV/VNAV DA	1258-2 522 (600-2)			NA
LNAV MDA	1180-1 444 (500-1)		1180-1¼ 444 (500-1¼)	NA
CIRCLING	1240-1 504 (600-1)		1260-1½ 524 (600-1½)	NA

ELEV 736 D



REIL Rwys 10 and 28 L
MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

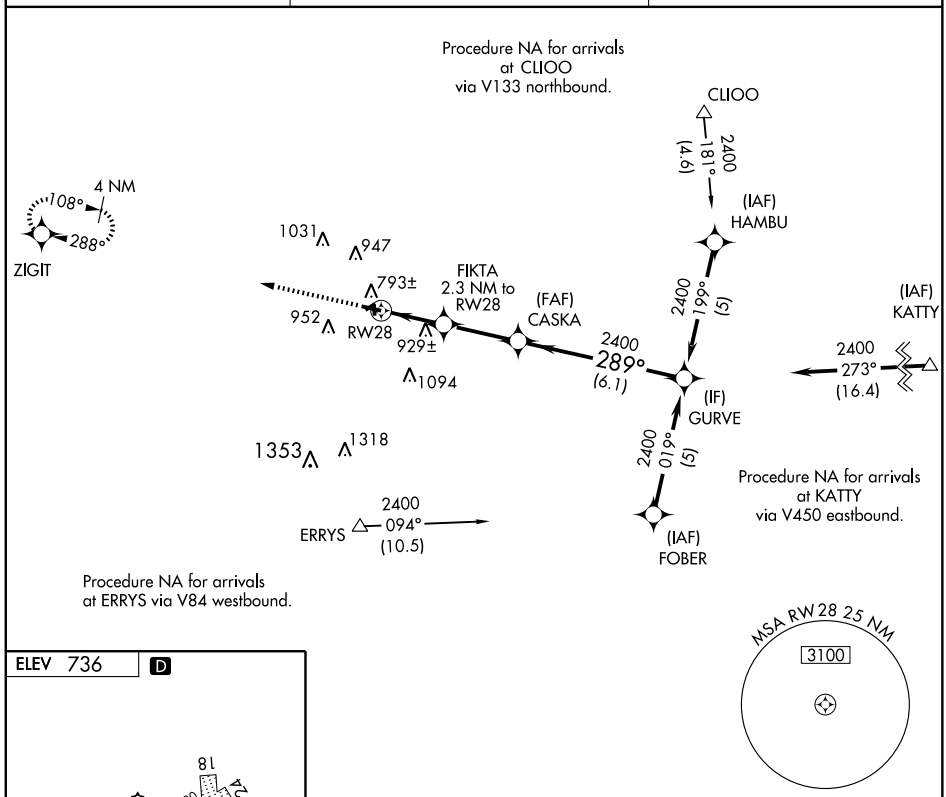
APP CRS	Rwy ldg	4300
289°	TDZE	736
	Apt Elev	736

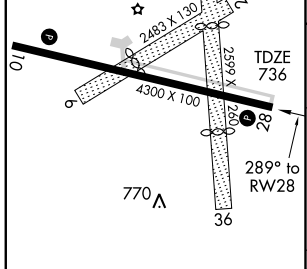
RNAV (GPS) RWY 28
OWOSSO COMMUNITY (RNP)

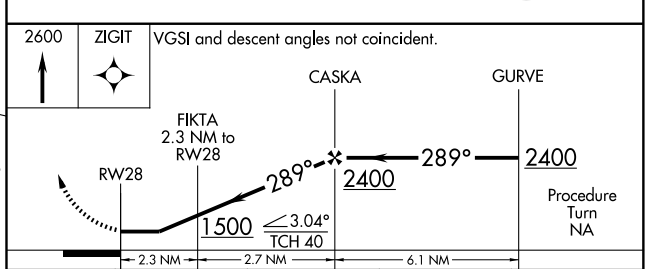
Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and LNAV Cat C visibility ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2600 direct ZIGIT and hold.

AWOS-3	FLINT APP CON	UNICOM
118.025	118.8 257.9	123.0 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1180-1 444 (500-1)		1180-1¼ 444 (500-1¼)	NA
CIRCLING	1240-1 504 (600-1)		1260-1½ 524 (600-1½)	NA

REIL Rwys 10 and 28 L
MIRL Rwy 10-28 L

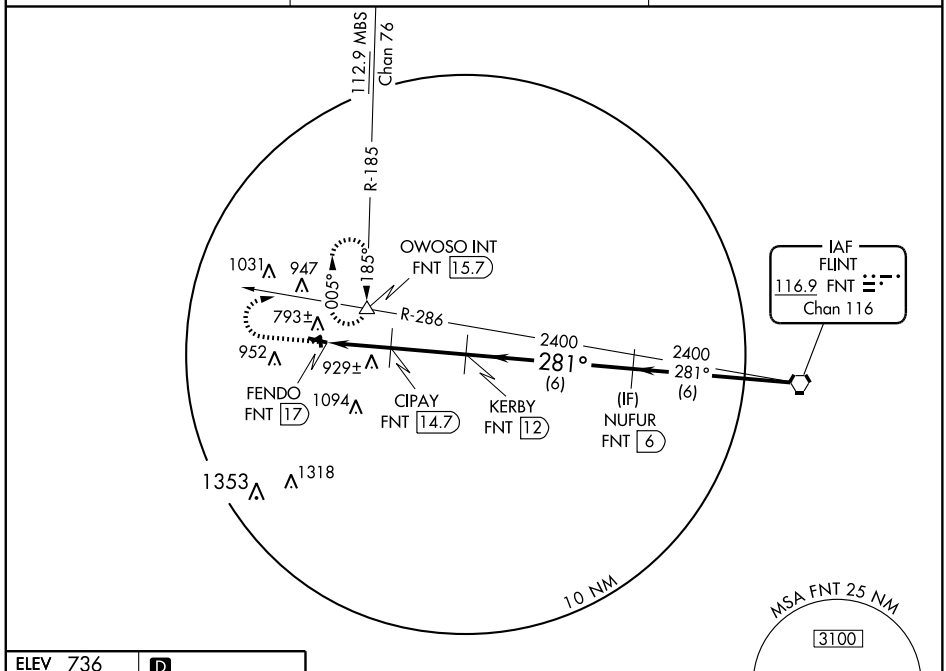
VORTAC FNT 116.9 Chan 116	APP CRS 281°	Rwy ldg 4300 TDZE 736 Apt Elev 736

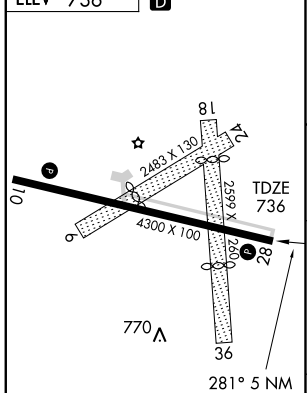
VOR/DME RWY 28
OWOSSO COMMUNITY (RNP)

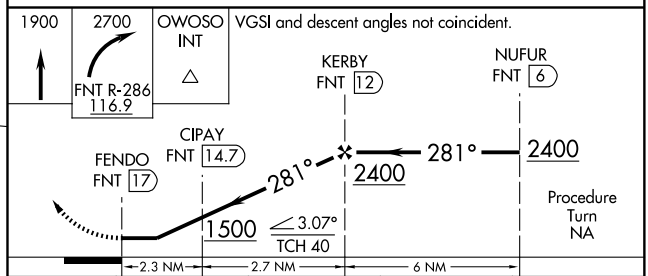
Circling to Rwy 6-24 and 18-36 NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and S-28 Cat C visibility ¼ mile. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2700 via FNT VORTAC R-286 to OWOSO INT and hold.

AWOS-3	FLINT APP CON	UNICOM
118.025	118.8 257.9	123.0 (CTAF) L







CATEGORY	A	B	C	D
S-28	1180-1	444 (500-1)	1180-1¼ 444 (500-1¼)	NA
CIRCLING	1240-1	504 (600-1)	1260-1½ 524 (600-1½)	NA

REIL Rwys 10 and 28 L
MIRL Rwy 10-28 L

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-PLN	APP CRS	Rwy ldg	6512
111.3	321°	TDZE	712
		Apt Elev	721

ILS or LOC RWY 32

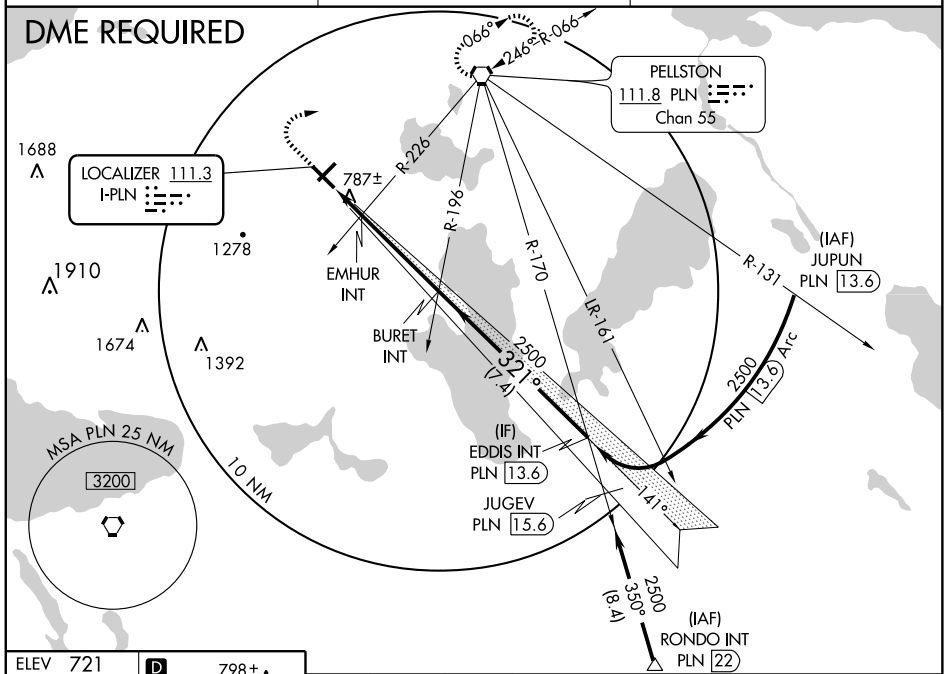
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

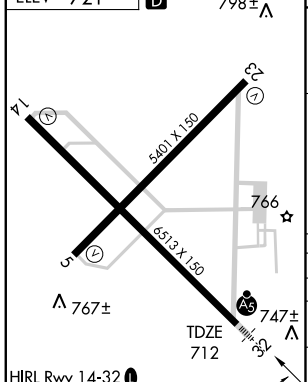
When local altimeter setting not received, use Harbor Springs altimeter setting and increase DA 28 feet, and all MDA 40 feet, increase S-LOC 32 Cat D and EMHUR fix minimums S-LOC 32 Cat C visibilities ¼ mile.

MALSR

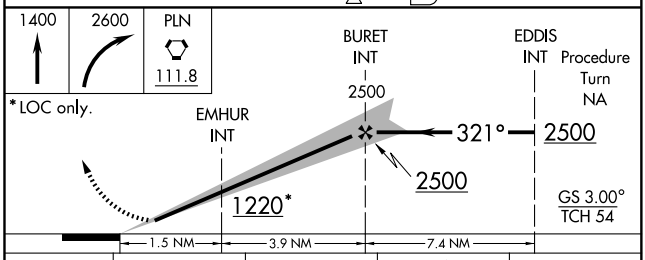
MISSED APPROACH: Climb to 1400 then climbing right turn to 2600 direct PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L





FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48



CATEGORY	A	B	C	D
S-ILS 32	912-½ 200 (200-½)			
S-LOC 32	1220-½ 508 (500-½)		1220-1 508 (500-1)	
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1½ 559 (600-1½)	1420-2¼ 699 (700-2¼)
	EMHUR FIX MINIMUMS			
S-LOC 32	1080-½ 368 (400-½)			1080-¾ 368 (400-¾)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1½ 559 (600-1½)	1420-2¼ 699 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5395
051°	TDZE	716
	Apt Elev	721

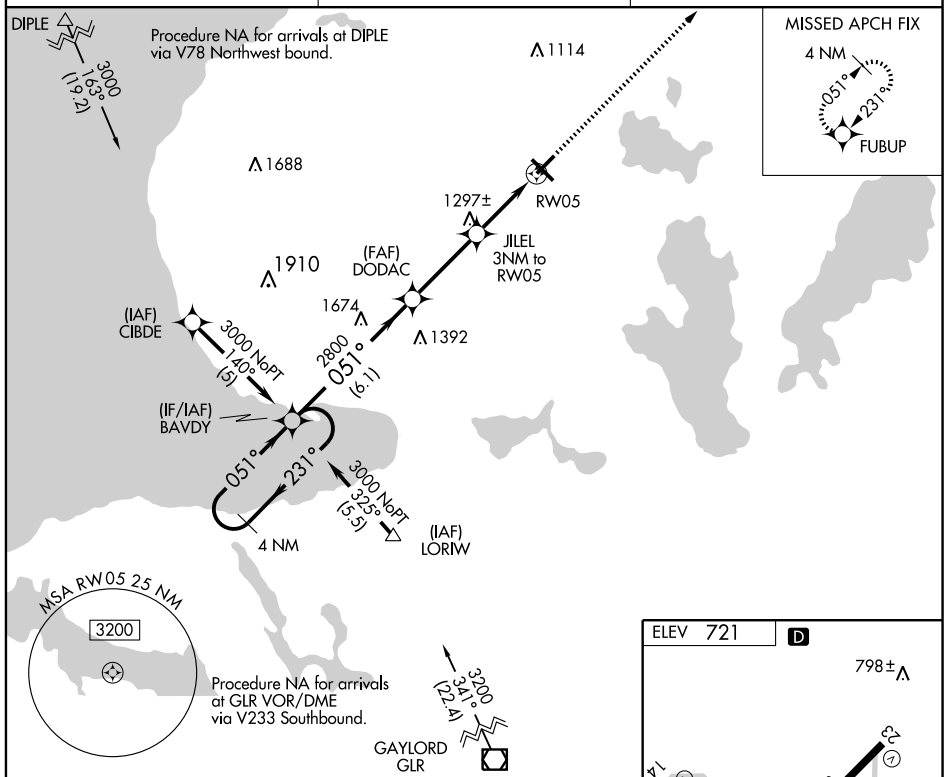
RNAV (GPS) RWY 5

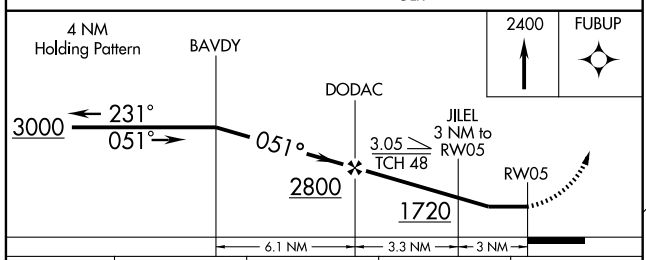
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

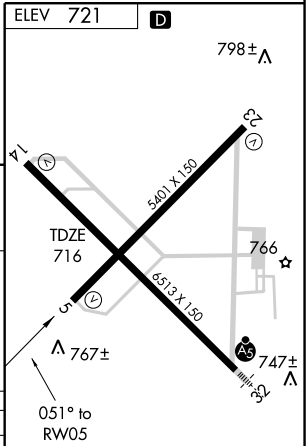
DME/DME RNP-0.3 NA. Visibility reductions by helicopters NA.
When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet, increase LNAV Cat. A/C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 2400 direct FUBUP and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L







HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

CATEGORY	A	B	C	D
LNAV MDA	1560-1 844 (900-1)	1560-1¼ 844 (900-1¼)	1560-2½ 844 (900-2½)	1560-2¾ 844 (900-2¾)
CIRCLING	1560-1 839 (900-1)	1560-1¼ 839 (900-1¼)	1560-2½ 839 (900-2½)	1560-2¾ 839 (900-2¾)

WAAS CH 81915 W23A	APP CRS 231°	Rwy ldg 5395 TDZE 721 Apt Elev 721

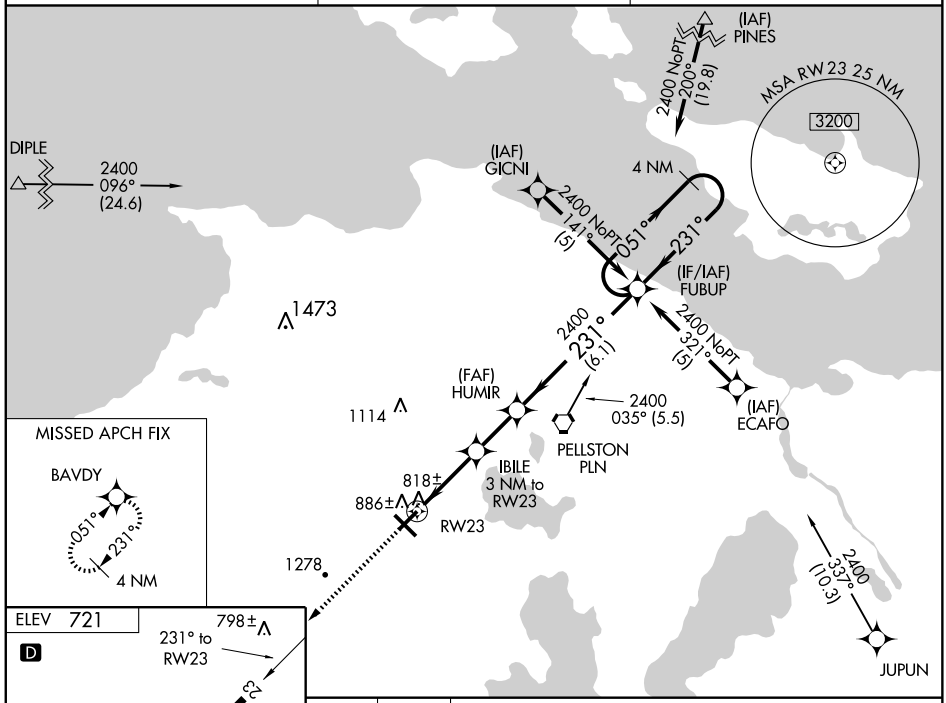
RNAV (GPS) RWY 23

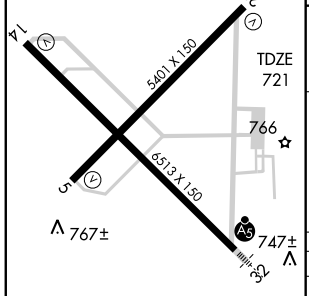
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

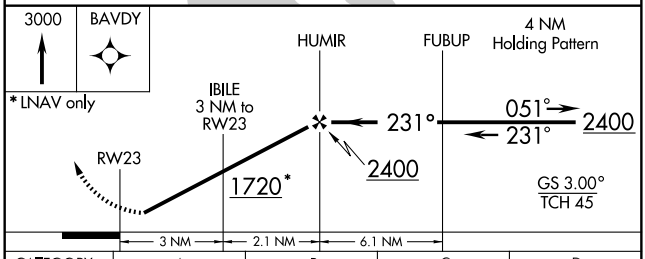
Baro-VNAV NA when using Harbor Springs altimeter setting.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase all DA 28 feet, all MDA 40 feet, increase LNAV/VNAV all Cats visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct BAVDY and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	1057-1¼ 336 (400-1¼)			
LNAV/VNAV DA	1109-1¼ 338 (400-1¼)			
LNAV MDA	1240-1 519 (600-1)		1240-1½ 519 (600-1½)	1240-1¾ 519 (600-1¾)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1½ 559 (600-1½)	1420-2¼ 699 (700-2¼)

HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 77813 W32A	APP CRS 321°	Rwy ldg 6512 TDZE 712 Apt Elev 721

RNAV (GPS) RWY 32

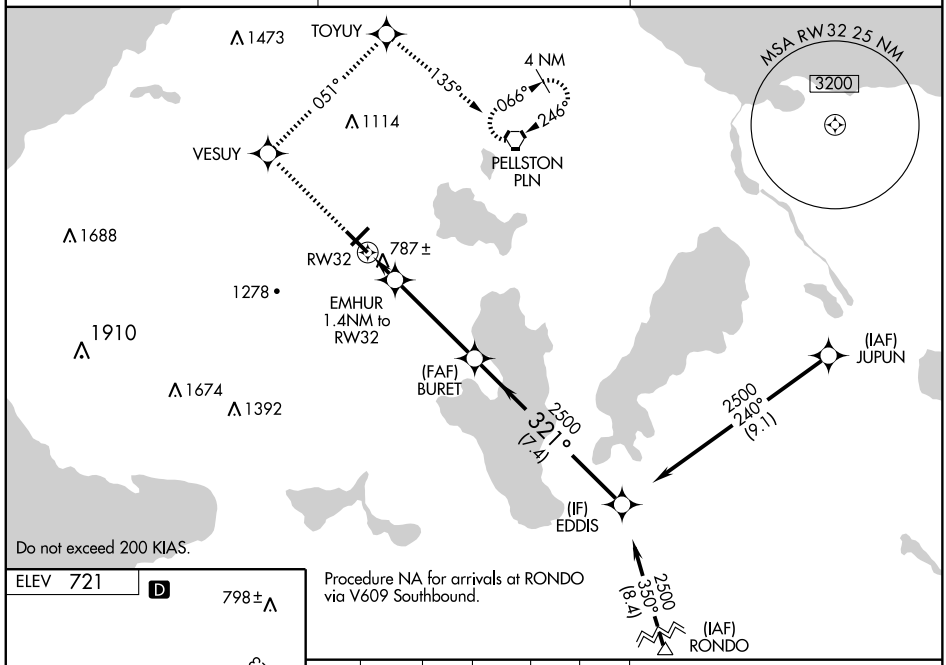
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

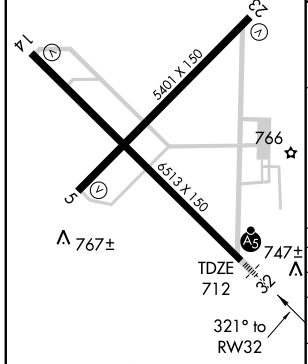
Inoperative table does not apply to LNAV Cat D. Baro-VNAV NA when using Harbor Springs altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase all DA 28 feet and all MDA 40 feet. For inoperative MALSR when using Harbor Springs altimeter setting, increase LNAV Cat D visibility to 1 ¼ mile.

MALSR

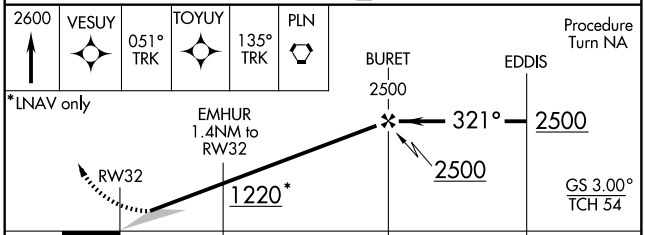
MISSED APPROACH: Climb to 2600 direct VESUY and via track 051° to TOYUY and via track 135° to PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L





HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L



CATEGORY	A	B	C	D
LPV DA	912-½ 200 (200-½)			
LNAV/VNAV DA	1056-¾ 344 (400-¾)			
LNAV MDA	1040-½ 328 (400-½)			1040-1 328 (400-1)
CIRCLING	1260-1 539 (600-1)	1280-1 559 (600-1)	1280-1½ 559 (600-1½)	1420-2¼ 699 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC PLN	APP CRS	Rwy ldg	5395
111.8	063°	TDZE	716
Chan 55		Apt Elev	721

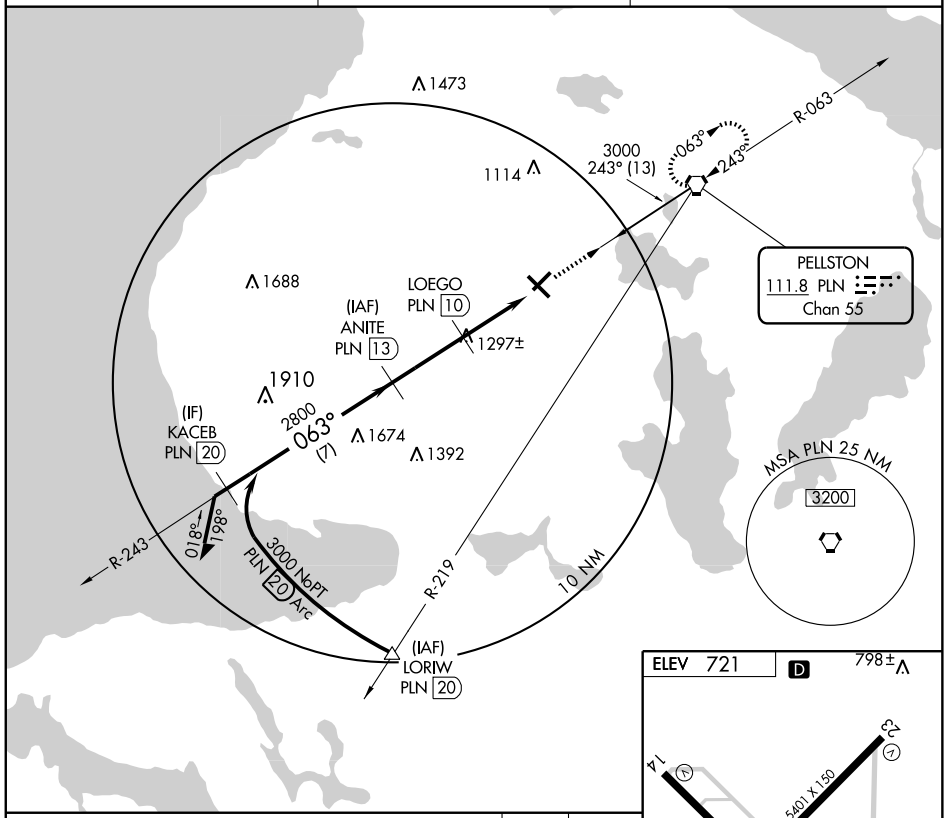
VOR/DME RWY 5

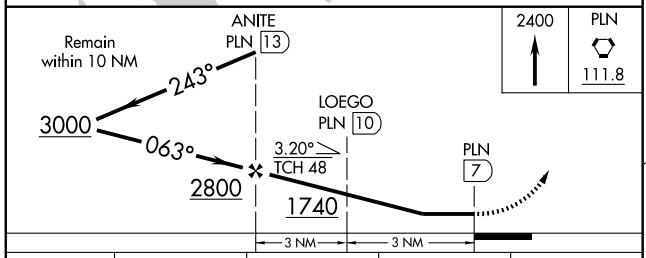
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

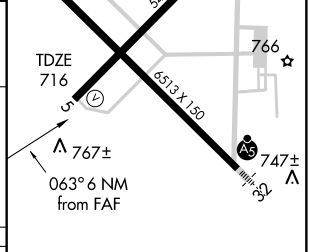
When local atimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet, increase S-5 Cat A/C/D visibilities ¼ mile.

MISSED APPROACH: Climb to 2400 direct PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L







CATEGORY	A	B	C	D
S-5	1560-1 844 (900-1)	1560-1¼ 844 (900-1¼)	1560-2½ 844 (900-2½)	1560-2¾ 844 (900-2¾)
CIRCLING	1560-1 839 (900-1)	1560-1¼ 839 (900-1¼)	1560-2½ 839 (900-2½)	1560-2¾ 839 (900-2¾)

HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC PLN	APP CRS	Rwy ldg 5395
111.8	245°	TDZE 721
Chan 55		Apt Elev 721

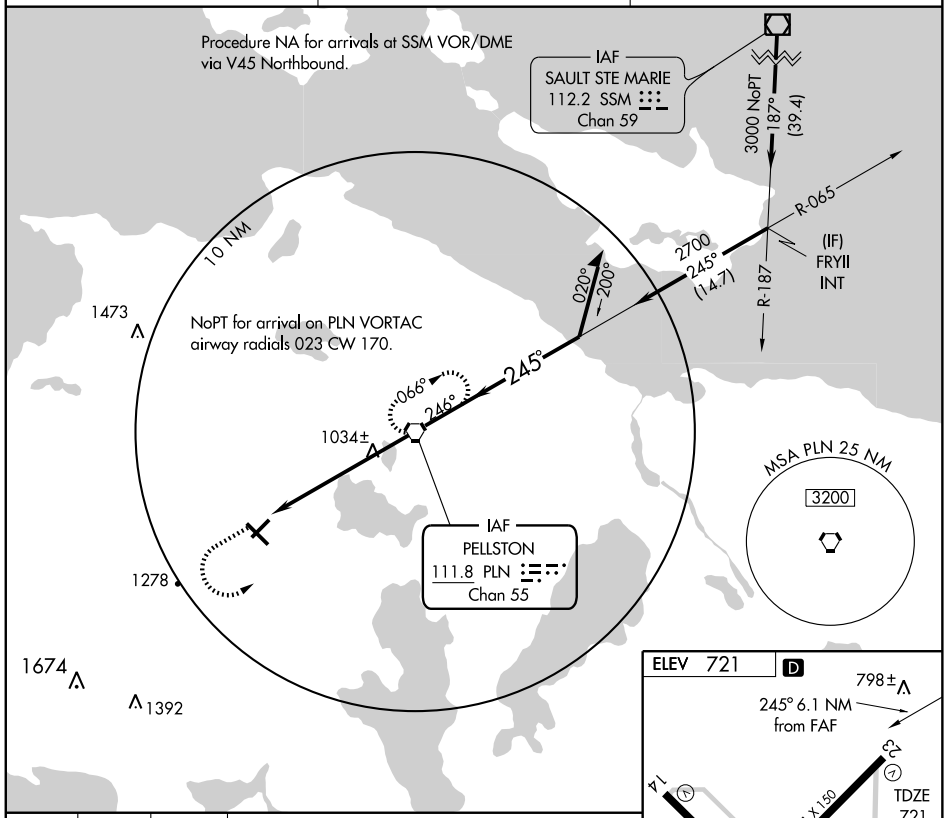
VOR RWY 23

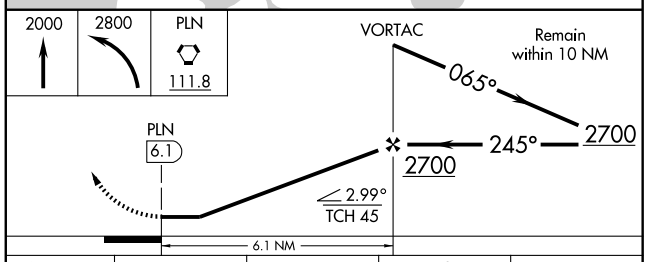
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

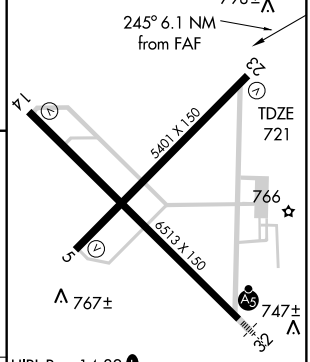
When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet. Increase all Cat C and S-23 Cat D visibility ¼ mile. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2800 direct PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L







HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

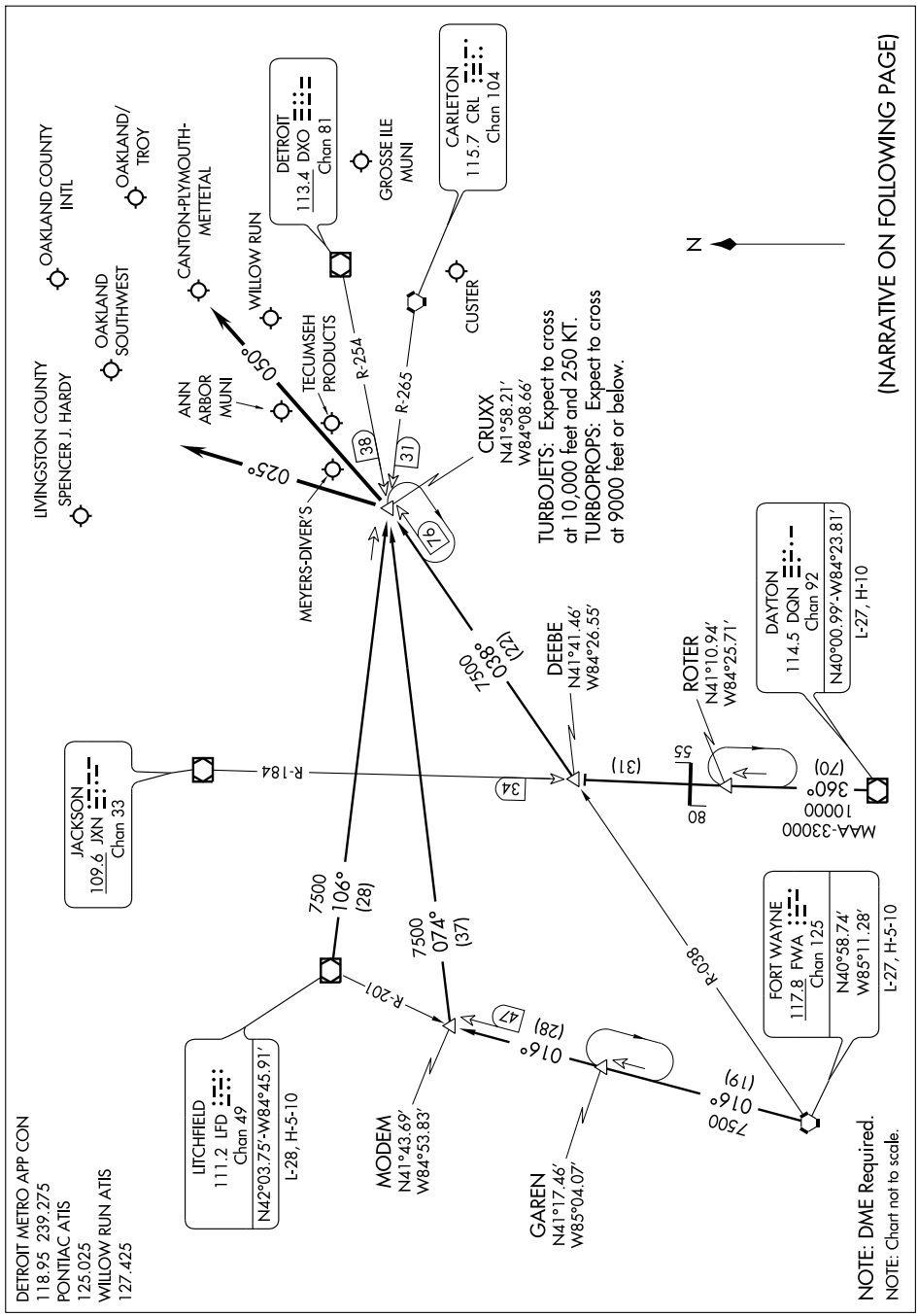
CATEGORY	A	B	C	D
S-23	1300-1 579 (600-1)		1300-1½ 579 (600-1½)	1300-1¾ 579 (600-1¾)
CIRCLING	1300-1 579 (600-1)		1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)

FAF to MAP 6.1 NM					
Knots	60	90	120	150	180
Min:Sec	6:06	4:04	3:03	2:26	2:02

EC-1. 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

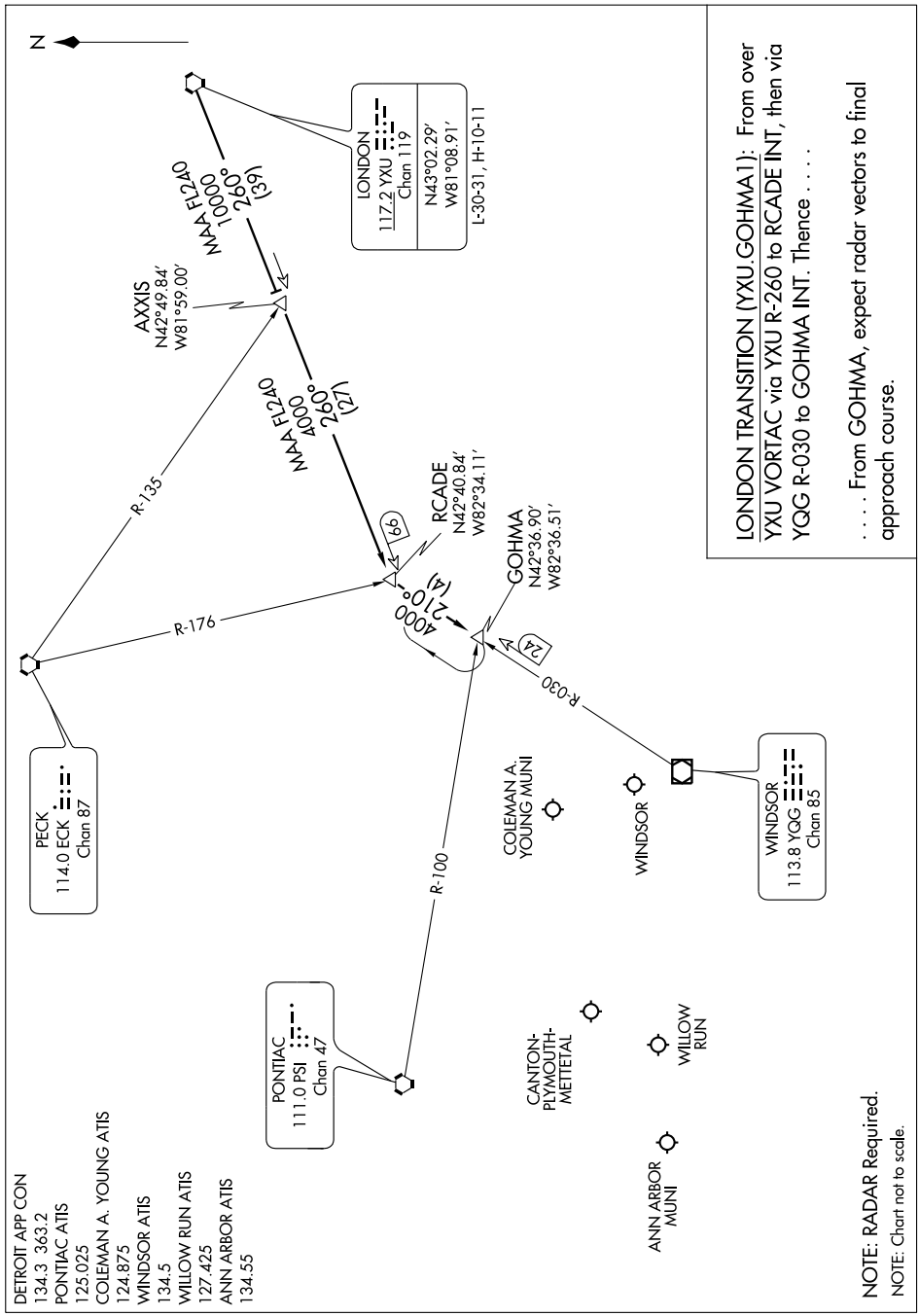
DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

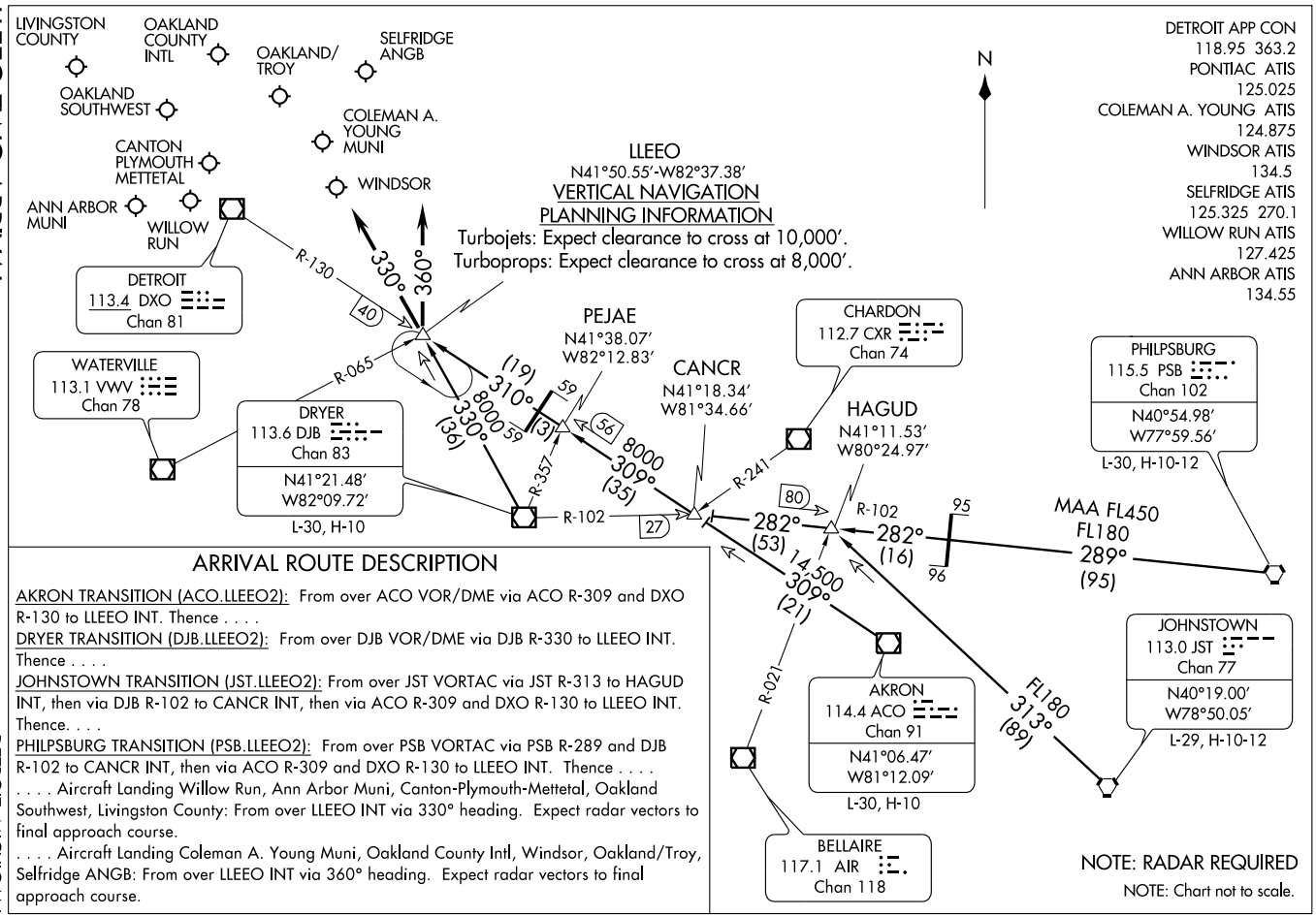
EC-1, 14 JAN 2010 to 11 FEB 2010

GOHMA ONE ARRIVAL

DETROIT, MICHIGAN



LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

APP CRS	Rwy ldg	2303
183°	TDZE	696
	Apt Elev	696

RNAV (GPS) RWY 18

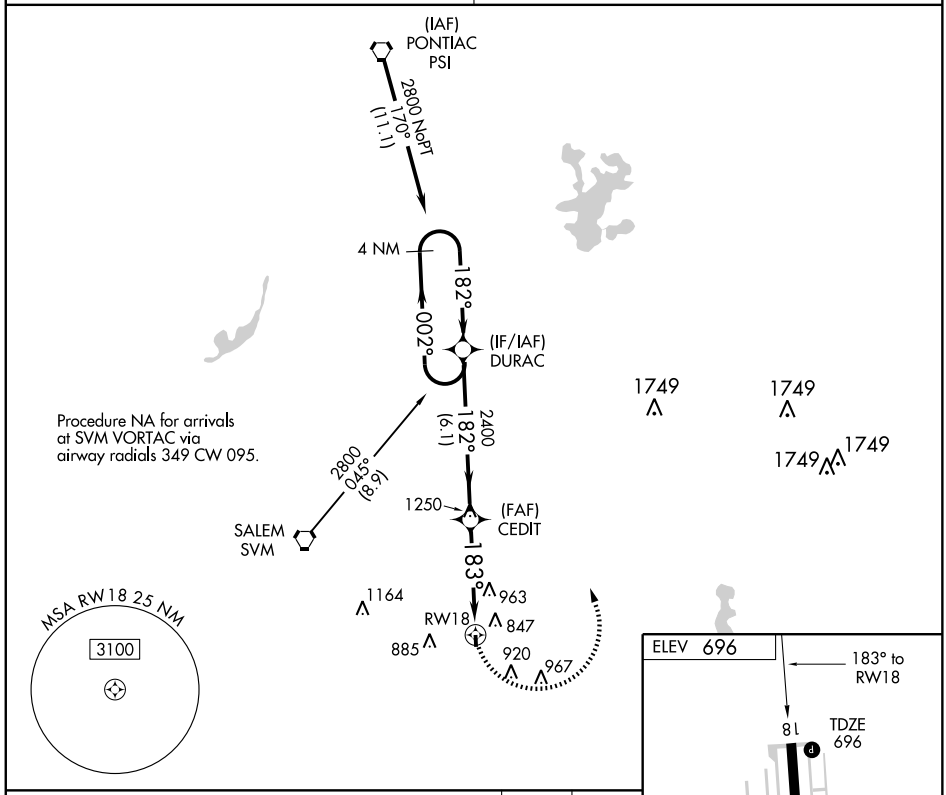
PLYMOUTH / CANTON-PLYMOUTH-METTETAL (1D2)

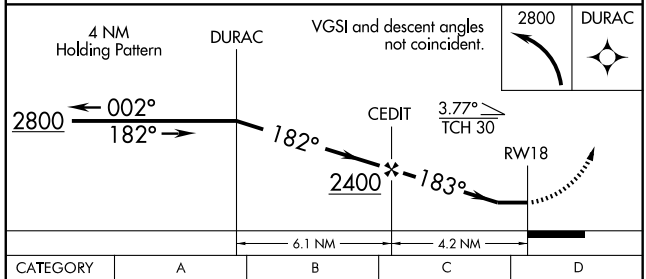
Use Willow Run altimeter setting; if not received, use Detroit Metropolitan Wayne County altimeter setting. Visibility reduction by helicopters NA. Circling NA at night. DME/DME RNP-0.3 NA.

NA

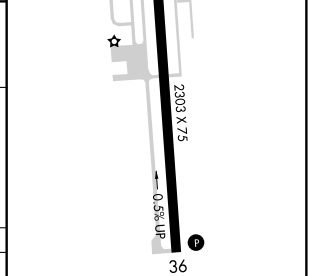
MISSED APPROACH: Climbing left turn to 2800 direct DURAC and hold.

DETROIT APP CON	UNICOM
118.95 363.2	122.7 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1300-1 604 (700-1)	NA		
CIRCLING	1300-1 604 (700-1)	NA		



MIRL Rwy 18-36 L

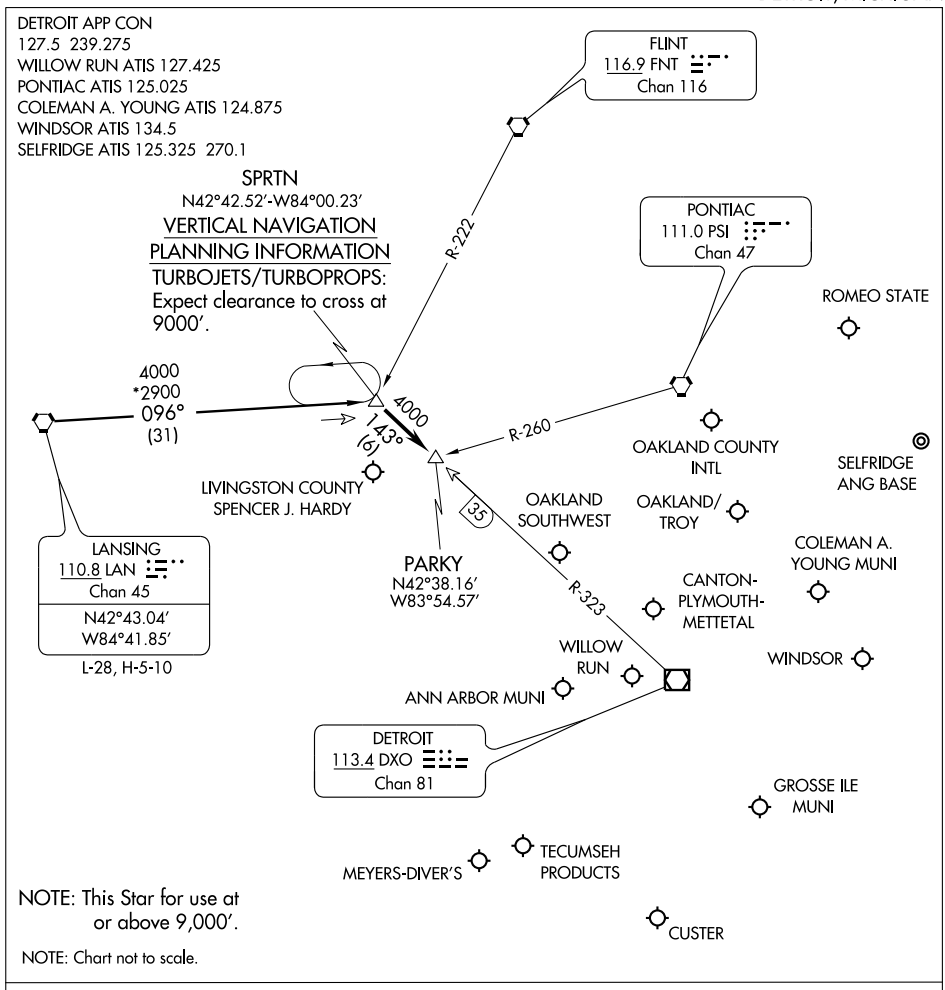
EC-1, 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

SVM VORTAC	APP CRS	Rwy ldg	N/A
114.3	124°	TDZE	N/A
Chan 90		Apt Elev	696

VOR-A

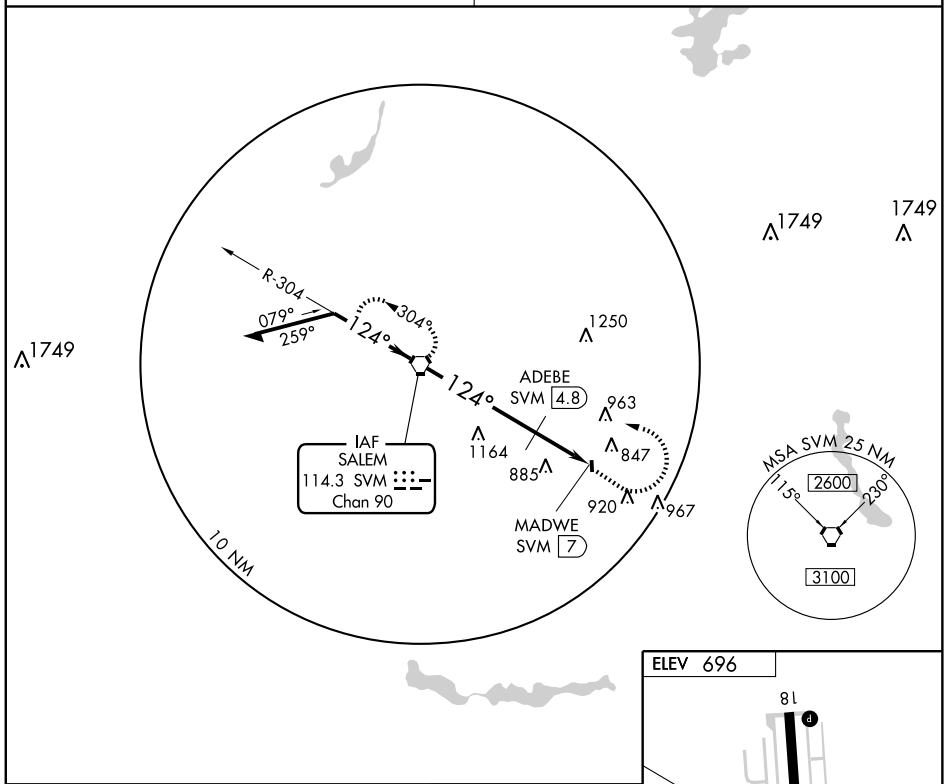
PLYMOUTH / CANTON-PLYMOUTH-METTETAL (1D2)

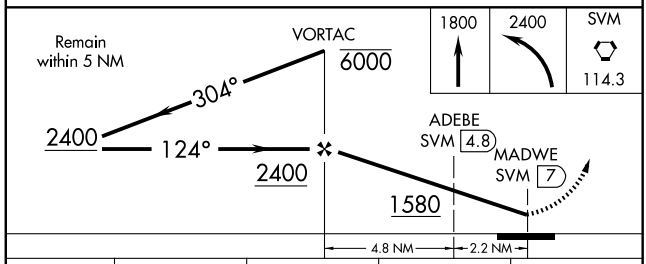
Use Willow Run altimeter setting; if not received, use Detroit Metropolitan Wayne County altimeter setting. Visibility reduction by helicopters NA.

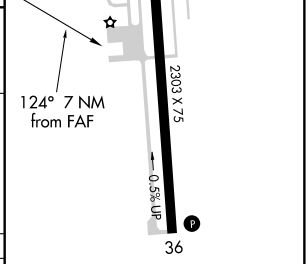
NA

MISSED APPROACH: Climb to 1800 then climbing left turn to 2400 direct SVM VORTAC and hold.

DETROIT APP CON	UNICOM
118.95 363.2	122.7 (CTAF) L







MIRL Rwy 18-36 L

CATEGORY	A	B	C	D
CIRCLING	1580-1¼ 884 (900-1¼)	NA		

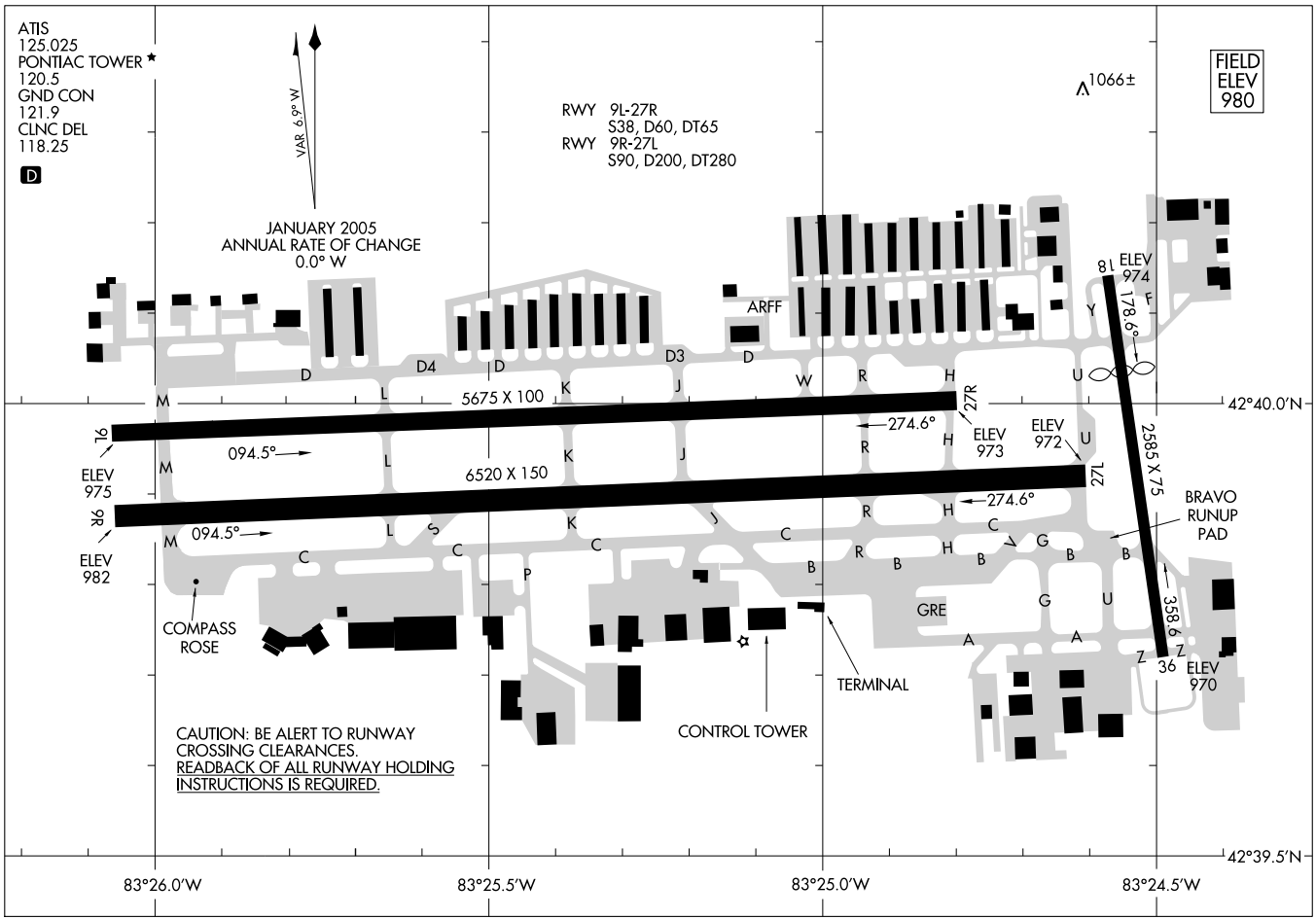
ADEBE FIX MINIMUMS

CIRCLING	1220 - 1 524 (600-1)	NA		

FAF to MAP 7 NM

Knots	60	90	120	150	180
Min:Sec	7:02	4:41	3:31	2:49	2:21

EC-1. 14 JAN 2010 to 11 FEB 2010



AIRPORT DIAGRAM

AL-5052 (FAA)

PONTIAC/OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

AKRON TWO DEPARTURE

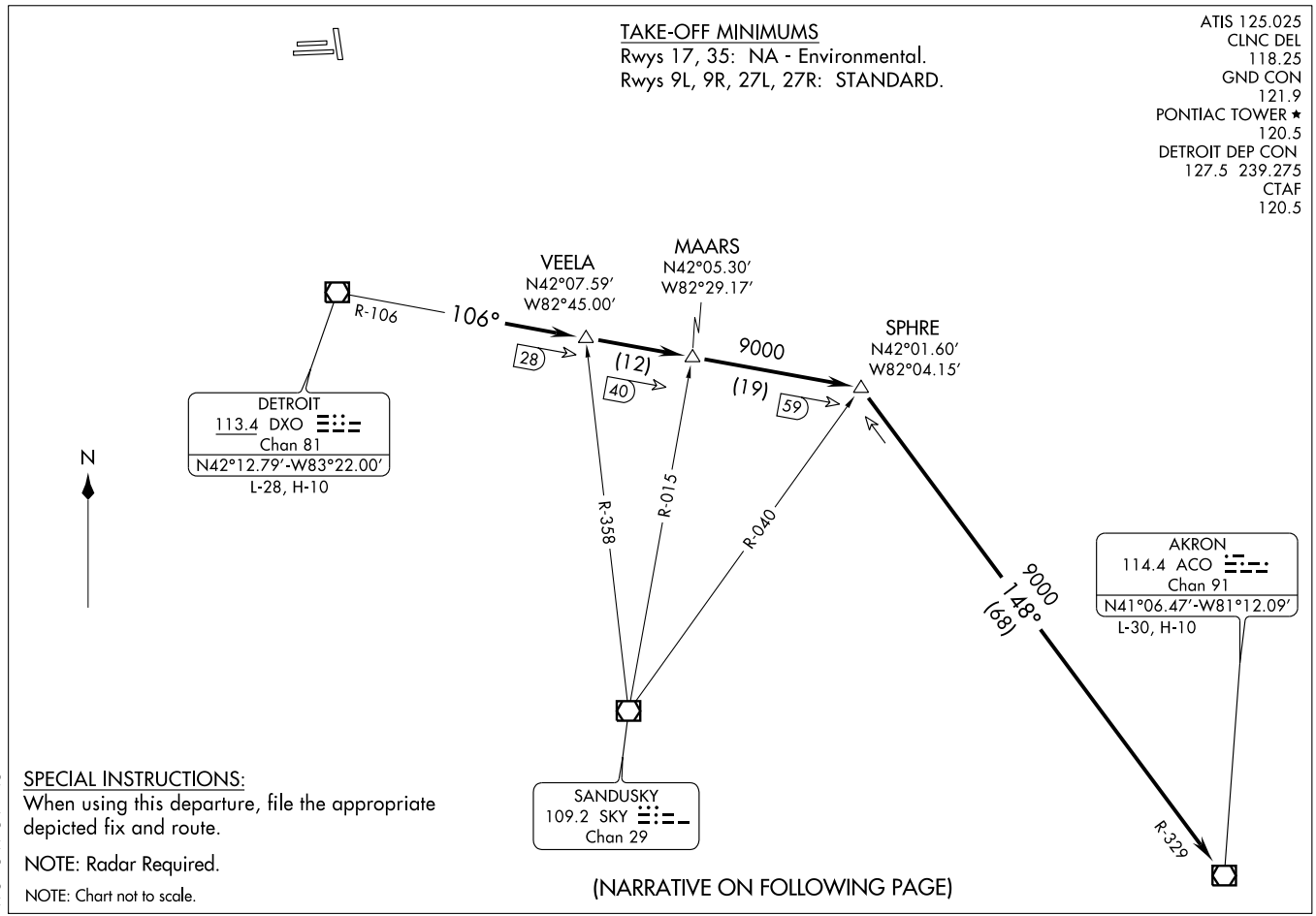
(ACO2.ACO) 09127

PONTIAC/ OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

SL-5052 (FAA)

ATIS 125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5
DETROIT DEP CON
127.5 239.275
CTAF
120.5

TAKE-OFF MINIMUMS
Rwys 17, 35: NA - Environmental.
Rwys 9L, 9R, 27L, 27R: STANDARD.



SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.

NOTE: Radar Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R and 27L/R: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-106 to SPHRE INT, then via ACO R-329 to ACO VOR/DME. Maintain 3000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES

Rwy 9R: Multiple Trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL.
Ant on Hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.

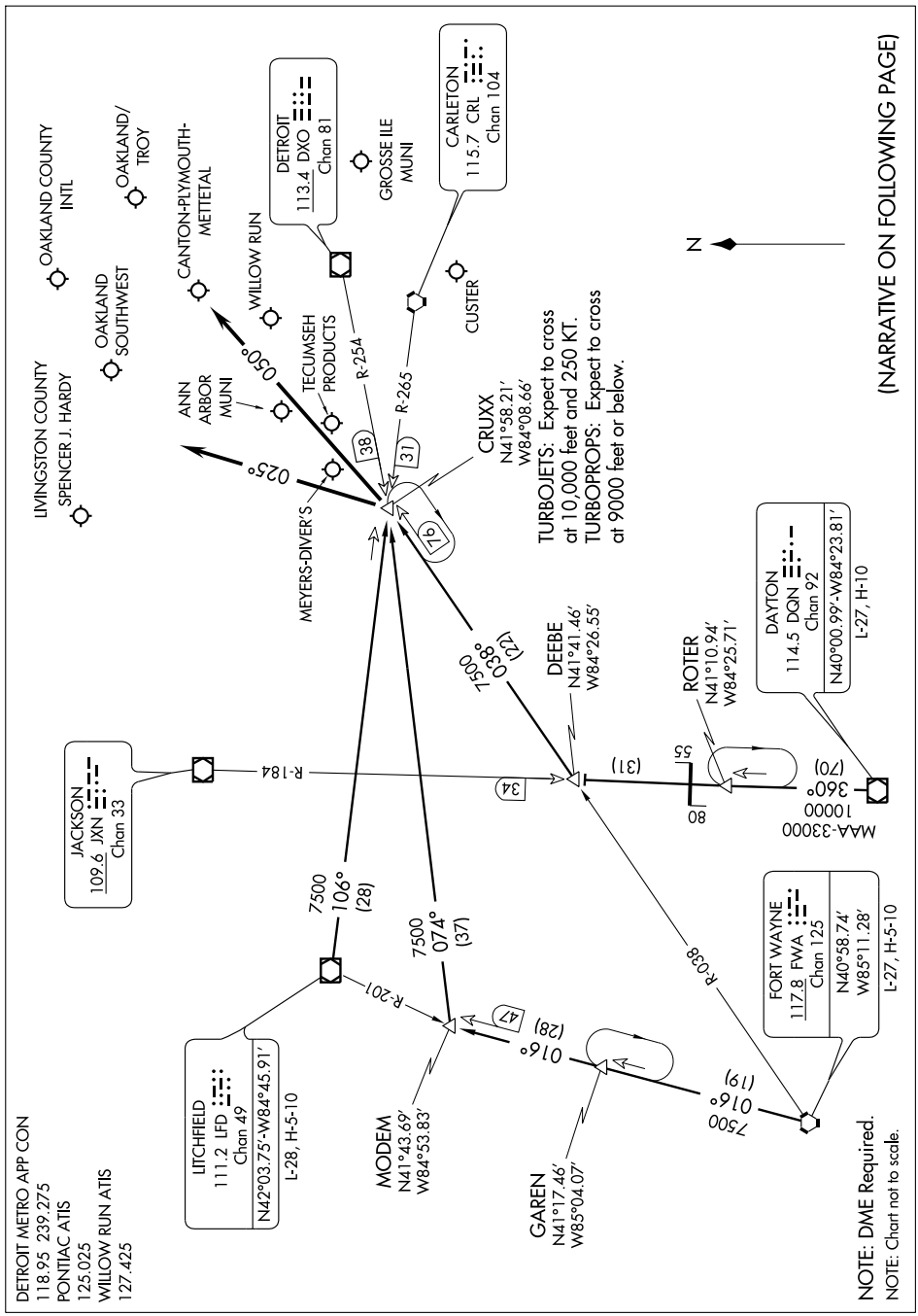
Rwy 27L: Multiple Trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL.
Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.

Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041 MSL′.

EC-1, 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

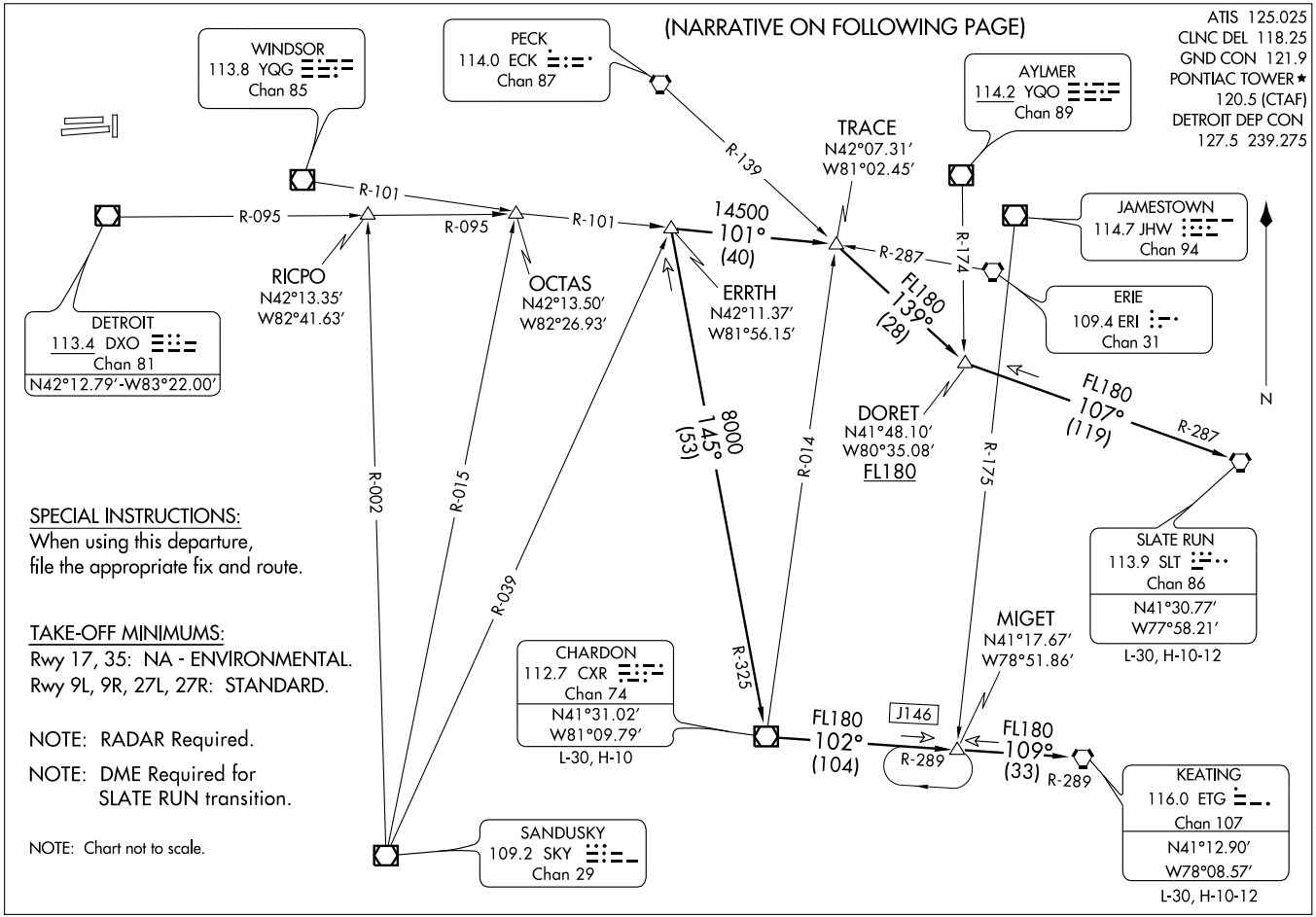
EC-1, 14 JAN 2010 to 11 FEB 2010

(ERRTH2.ERRTH) 09127

ERRTH TWO DEPARTURE

PONTIAC/ OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

SL-5052 (FAA)



SPECIAL INSTRUCTIONS:
When using this departure,
file the appropriate fix and route.

TAKE-OFF MINIMUMS:
Rwy 17, 35: NA - ENVIRONMENTAL.
Rwy 9L, 9R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: DME Required for
SLATE RUN transition.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R and 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

CHARDON TRANSITION (ERRTH2.CXR): From over ERRTH INT via CXR R-325 to CXR VOR/DME.
KEATING TRANSITION (ERRTH2.ETG): From over ERRTH INT via CXR R-325 to CXR VOR/DME, then via CXR R-102 and ETG R-289 to MIGET INT, then via ETG R-289 to ETG VORTAC.
SLATE RUN TRANSITION (ERRTH2.SLT): (DME Required) From over ERRTH INT via YQG R-101 to TRACE INT, then via ECK R-139 to DORET INT, then via SLT R-287 to SLT VORTAC.

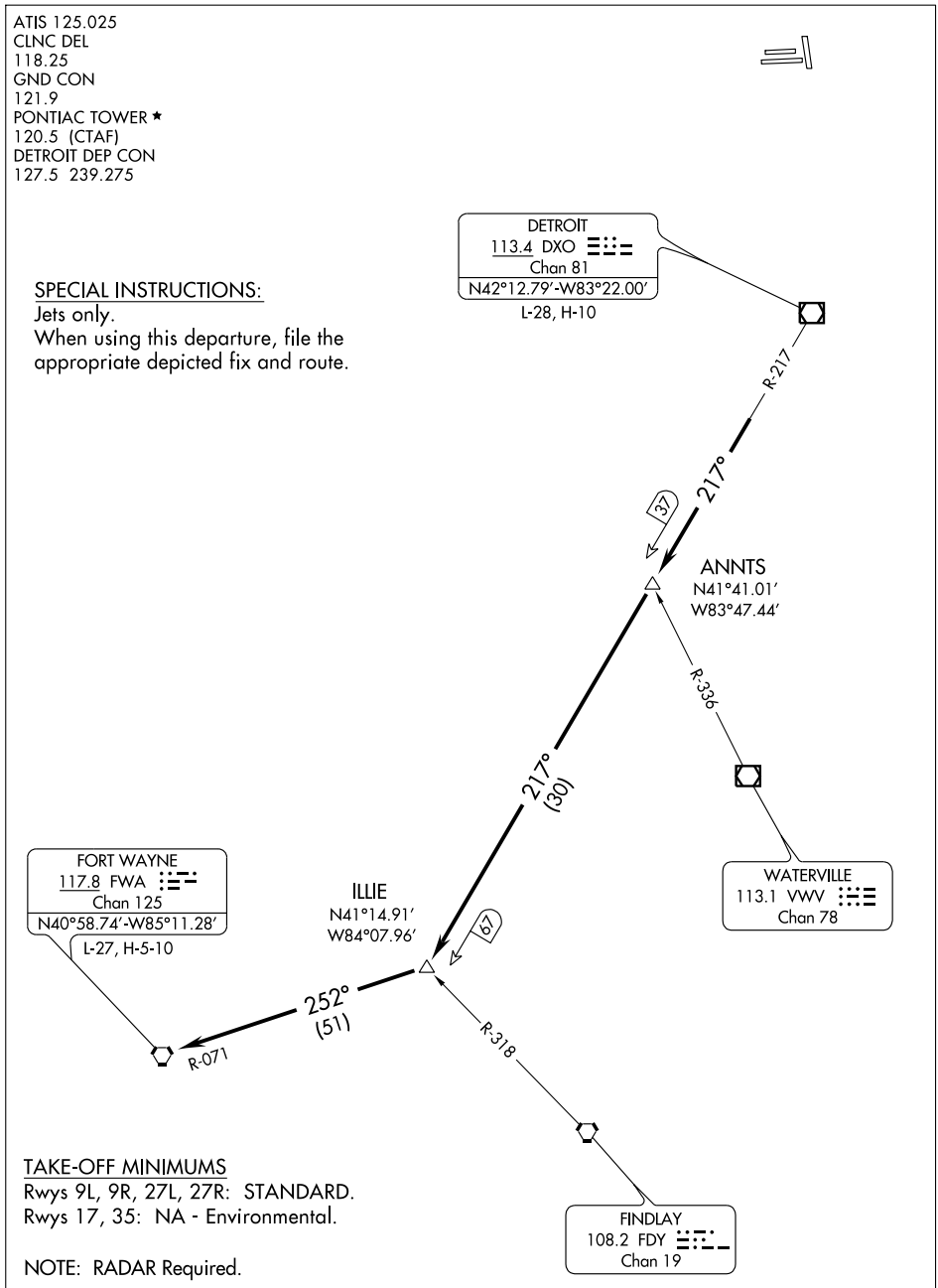
TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL. Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.
Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL. Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

FORT WAYNE THREE DEPARTURE

ATIS 125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
127.5 239.275

SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.



TAKE-OFF MINIMUMS
Rwys 9L, 9R, 27L, 27R: STANDARD.
Rwys 17, 35: NA - Environmental.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors, thence. . . .

. . . .to intercept DXO VOR/DME R-217 to ILLIE INT, then via FWA R-071 to FWA VORTAC. Maintain 3000, expect clearance to filed flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL.
Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.
Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL.
Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

LOC I-PTK	APP CRS	Rwy ldg	6520
111.1	092°	TDZE	980
		Apt Elev	980

ILS or LOC RWY 9R

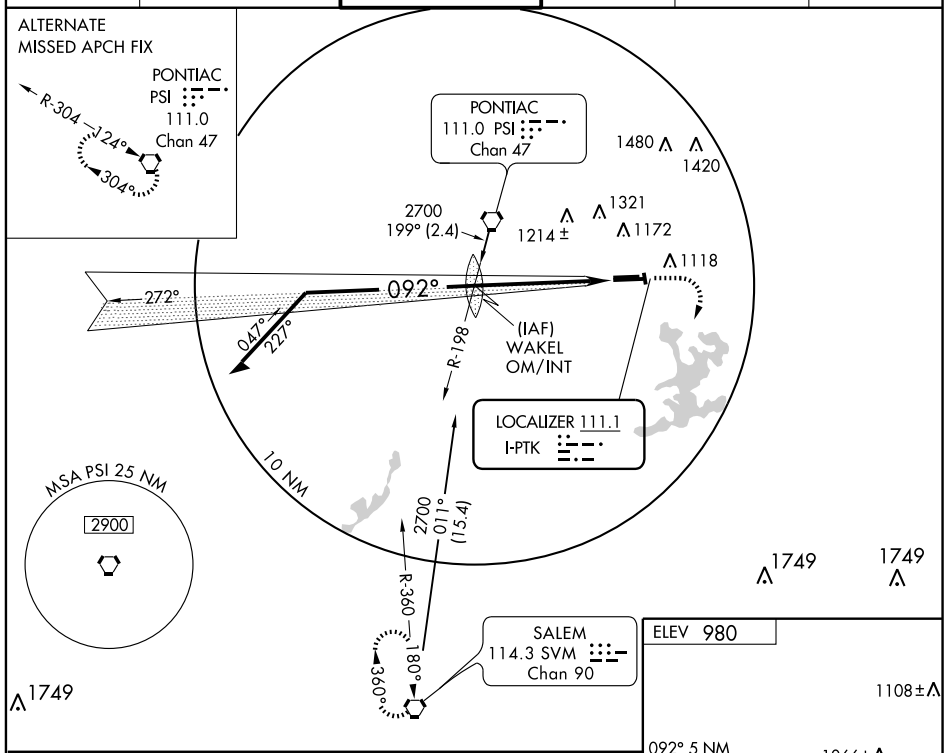
PONTIAC/OAKLAND COUNTY INTL (PTK)

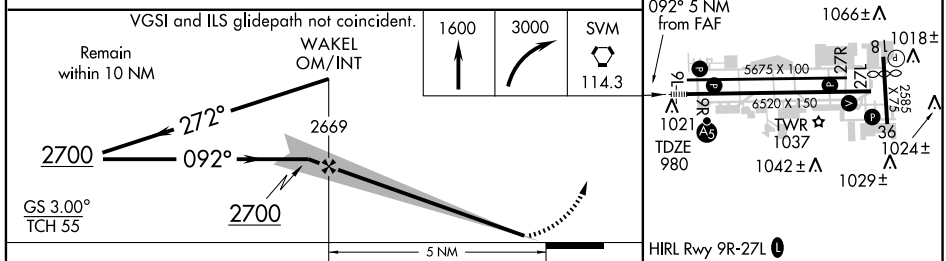
T A *RVR 1800 authorized with the use of FD or AP or HUD to DA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase DA 105 feet and all MDA 120 feet, increase S-LOC 9R Cats C and D visibility ½ mile, circling Cat B visibility ¼ mile, Cats C and D visibility ½ mile.

MALSR A5

MISSED APPROACH: Climb to 1600, then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER*	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF) A5	121.9	118.25	122.95 L





HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwys 9L and 27L L
REIL Rwy 27R

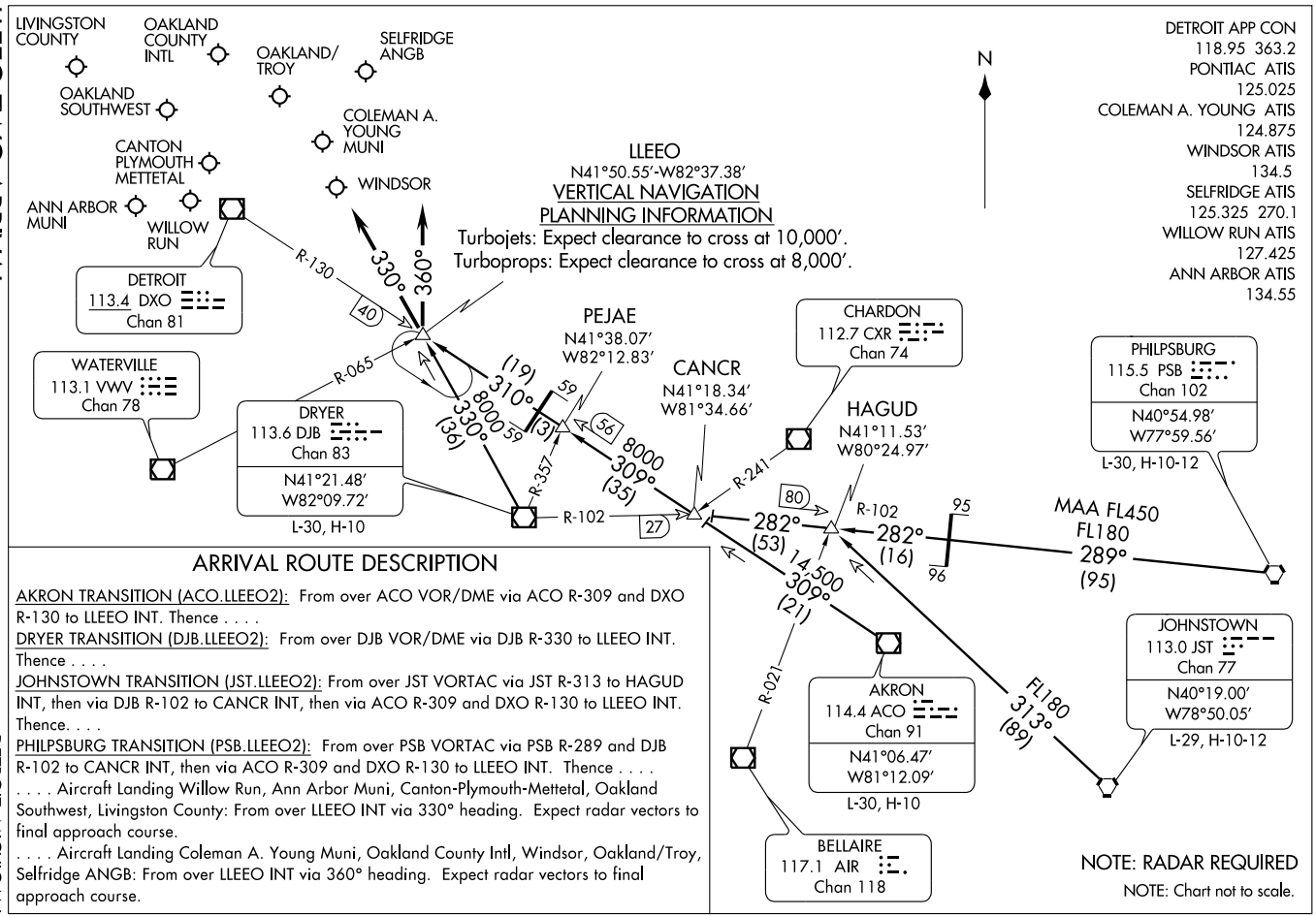
CATEGORY	A	B	C	D
S-ILS 9R	*1180/24		200 (200-½)	
S-LOC 9R	1620/24	640 (700-½)	1620/60 640 (700-1¼)	1620-1½ 640 (700-1½)
CIRCLING	1620-1	640 (700-1)	1620-1¾ 640 (700-1¾)	1640-2 660 (700-2)

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1. 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

LOC I-PTK	APP CRS	Rwy ldg	6520
111.1	272°	TDZE	974
		Apt Elev	980

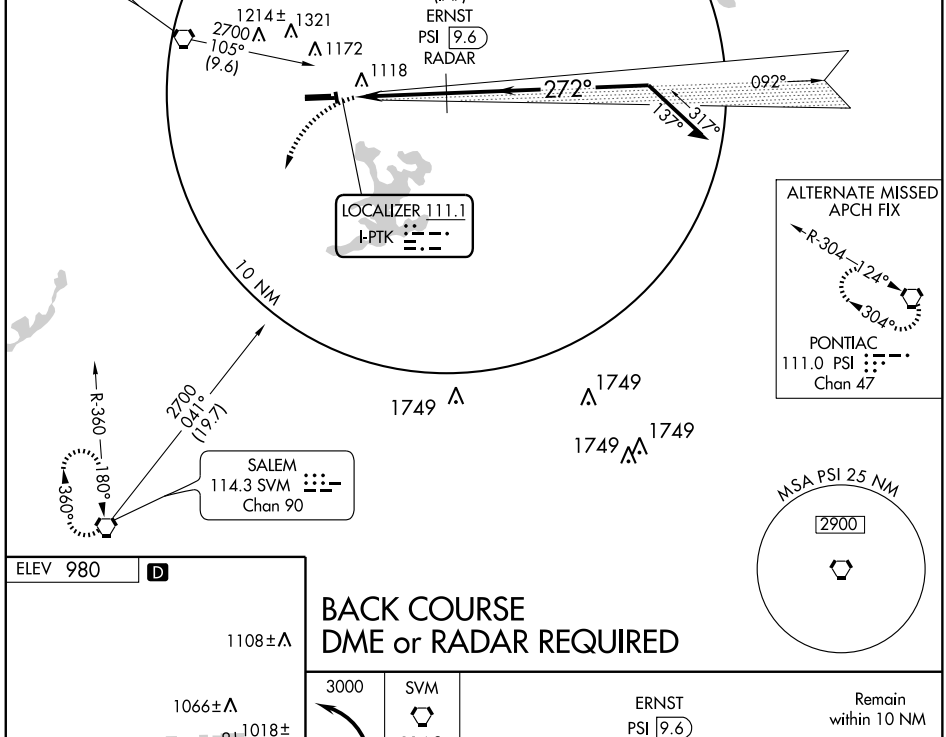
LOC BC RWY 27L

PONTIAC/OAKLAND COUNTY INTL (PTK)

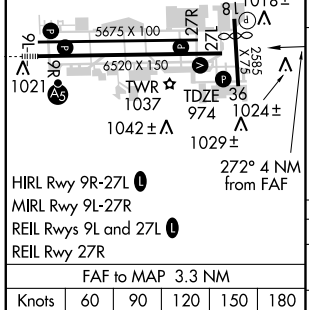
When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all MDA 120 feet, increase S-27L Cat C/D visibility ¼ mile and Circling Cat C/D visibility ½ mile.

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER★	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF) A5	121.9	118.25	122.95 L



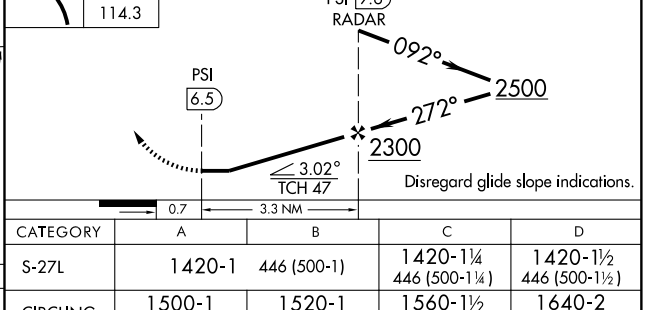
ELEV 980 D



HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwys 9L and 27L L
REIL Rwy 27R

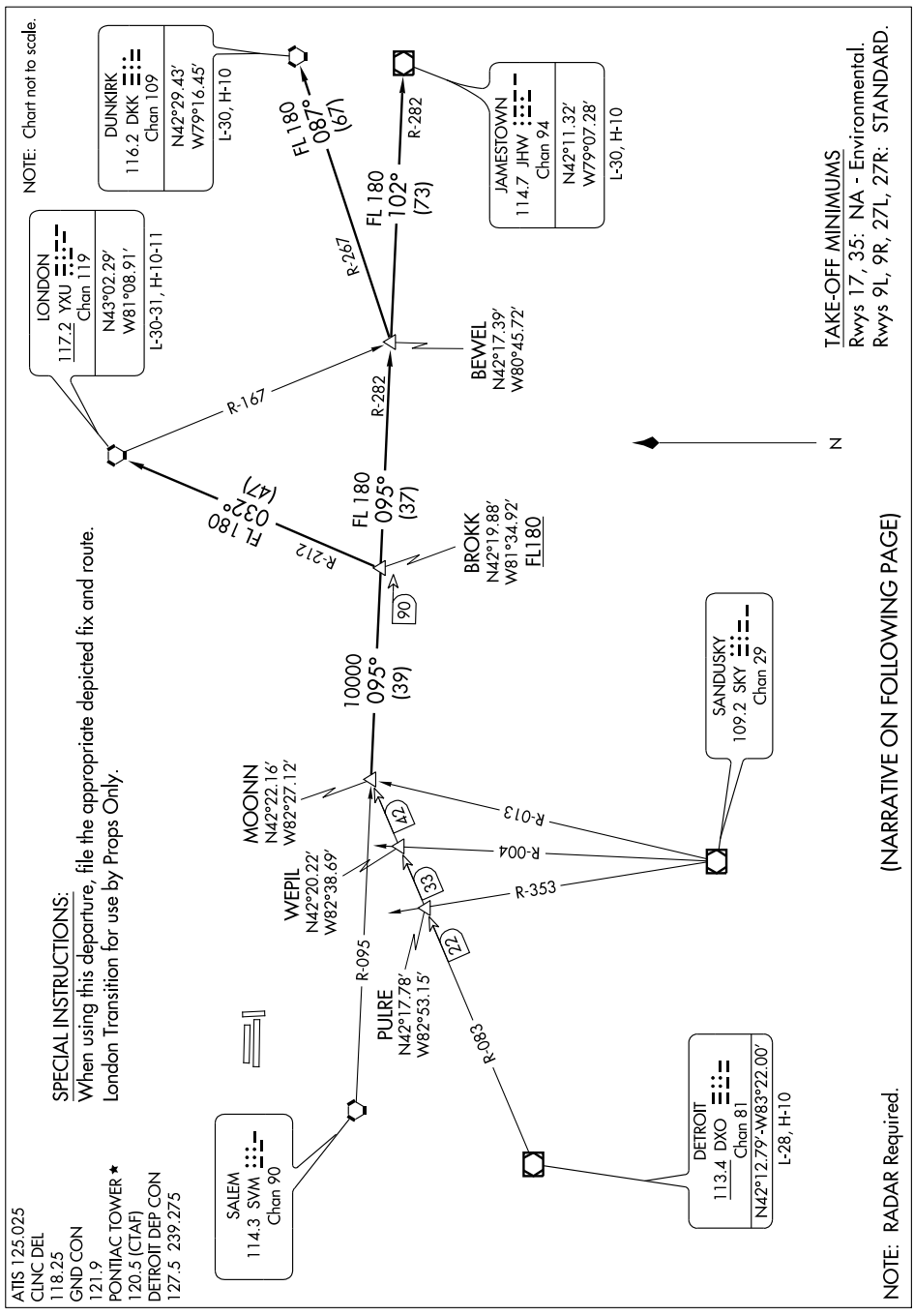
FAF to MAP 3.3 NM					
Knots	60	90	120	150	180
Min:Sec	3:18	2:12	1:39	1:19	1:06

BACK COURSE
DME or RADAR REQUIRED



CATEGORY	A	B	C	D
S-27L	1420-1	446 (500-1)	1420-1¼ 446 (500-1¼)	1420-1½ 446 (500-1½)
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)

EC-1, 14 JAN 2010 to 11 FEB 2010


NOTE: Chart not to scale.
DUNKIRK
116.2 DKK
Chan 109
N42°29.43'
W79°16.45'
L-30, H-10
LONDON
117.2 YXU
Chan 119
N43°02.29'
W81°08.91'
L-30-31, H-10-11
JAMESTOWN
114.7 JHW
Chan 94
N42°11.32'
W79°07.28'
L-30, H-10
FL 180
087°
(67)
R-267
FL 180
102°
(73)
R-282
R-167
R-282
BEWEL
N42°17.39'
W80°45.72'
FL 180
032°
(47)
R-212
FL 180
095°
(37)
BROKK
N42°19.88'
W81°34.92'
FL180
90
10000
095°
(39)
MOONN
N42°22.16'
W82°27.12'
WEPIL
N42°20.22'
W82°38.69'
PULRE
N42°17.78'
W82°53.15'
27
33
22
R-013
R-004
R-353
R-095
R-083
SANDUSKY
109.2 SKY
Chan 29
SALEM
114.3 SVM
Chan 90
DETROIT
113.4 DXO
Chan 81
N42°12.79'-W83°22.00'
L-28, H-10
N
SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted fix and route.
London Transition for use by Props Only.
TAKE-OFF MINIMUMS
Rwys 17, 35: NA - Environmental.
Rwys 9L, 9R, 27L, 27R: STANDARD.
ATIS 125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
127.5 239.275
NOTE: RADAR Required.
(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R:
Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude/ flight level ten (10) minutes after departure.

DUNKIRK TRANSITION (MOONN2.DKK): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via DKK R-267 to DKK VORTAC.

JAMESTOWN TRANSITION (MOONN2.JHW): From over MOONN INT via SVM R-095 to BROKK INT, then via SVM R-095 and JHW R-282 to BEWEL INT, then via JHW R-282 to JHW VOR/DME.

LONDON TRANSITION (MOONN2.YXU): From over MOONN INT via SVM R-095 to BROKK INT, then via YXU R-212 to YXU VORTAC.

TAKE-OFF OBSTACLES

Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL. Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.

Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL. Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′MSL.

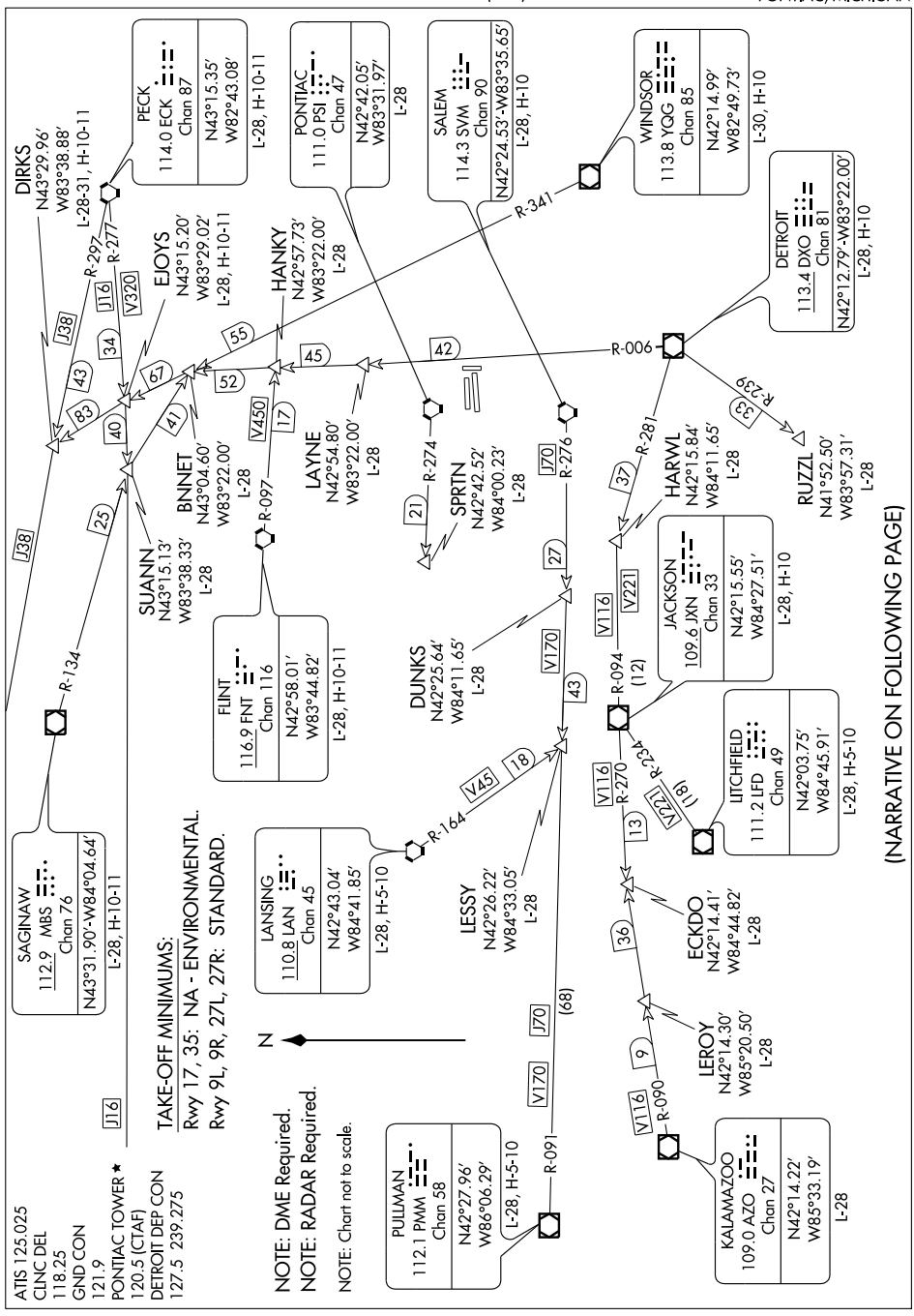
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

PALACE THREE DEPARTURE

SL-5052 (FAA)

PONTIAC/ OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

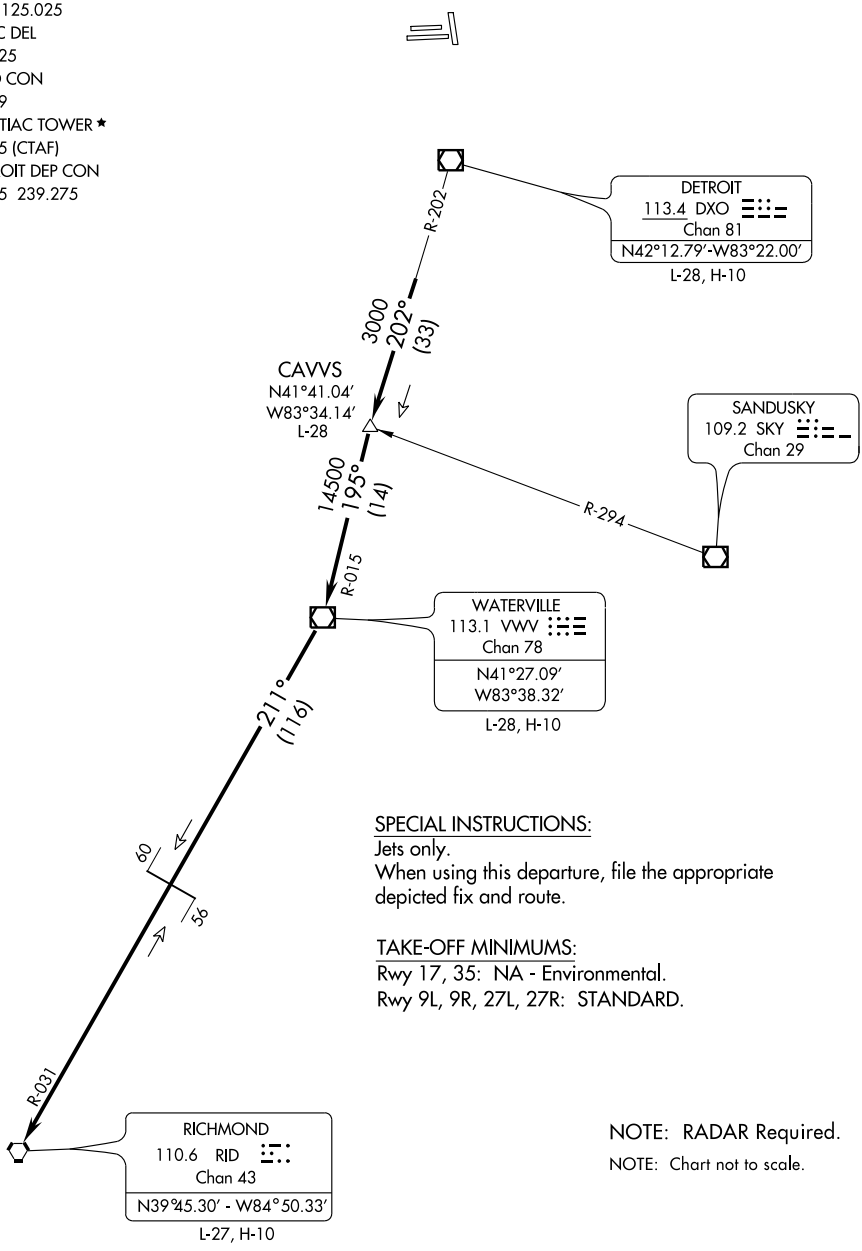
SPECIAL INSTRUCTIONS:
When using this departure, file the appropriate depicted departure fix and route.
Aircraft landing/overflying Lansing (LAN) at 10,000 feet or below, file via SPRTN.
Aircraft landing/overflying Flint (FNT) at 10,000 feet or below, file via LAYNE.
Aircraft landing/overflying Toledo (TOL) at 10,000 feet or below, file via RUZZL.
Aircraft over HARWL must file FL220 and below.

TAKE-OFF OBSTACLES:
Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL. Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.
Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL. Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

EC-1, 14 JAN 2010 to 11 FEB 2010

RICHMOND FOUR DEPARTURE SL-5052 (FAA)

ATIS 125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
127.5 239.275



SPECIAL INSTRUCTIONS:
Jets only.
When using this departure, file the appropriate depicted fix and route.

TAKE-OFF MINIMUMS:
Rwy 17, 35: NA - Environmental.
Rwy 9L, 9R, 27L, 27R: STANDARD.

NOTE: RADAR Required.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R:
Climb via assigned heading for radar vectors, thence. . . .

. . . . To intercept DXO VOR/DME R-202 to CAVVS INT/DXO 33 DME, then via VWV R-015 to VWV VOR/DME. Then right turn via VWV R-211 and RID R-031 to RID VORTAC. Maintain 3,000 feet, expect clearance to filed altitude/flight level ten (10) minutes after departure.

TAKE OFF OBSTACLES:

Rwy 9R:	Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL. Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.
Rwy 27L:	Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL. Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′MSL.
Rwy27R:	Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

WAAS CH 90415 W09A	APP CRS 092°	Rwy ldg 6520 TDZE 980 Apt Elev 980

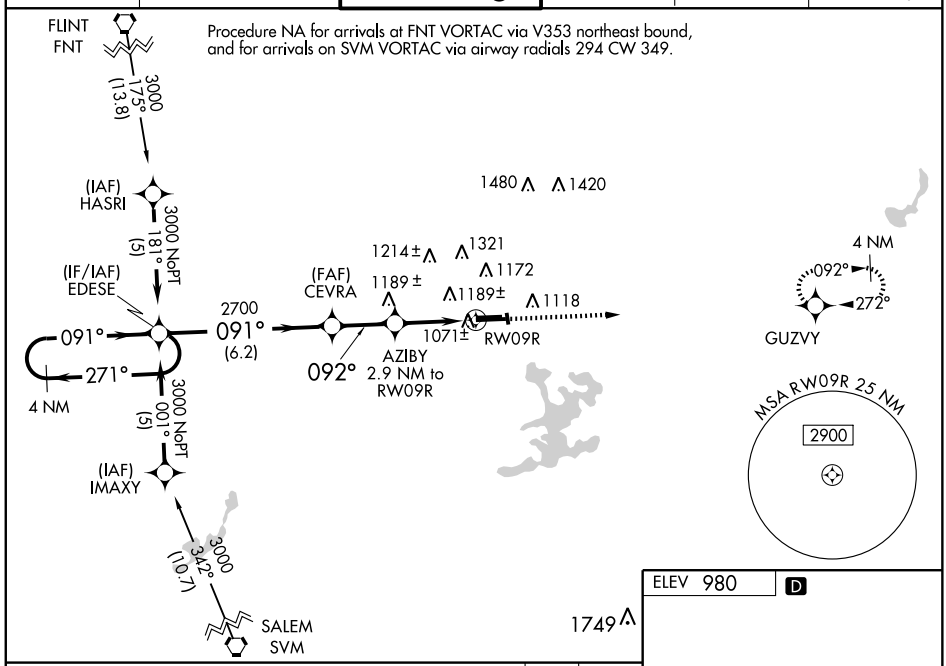
RNAV (GPS) RWY 9R
PONTIAC/OAKLAND COUNTY INTL (PTK)

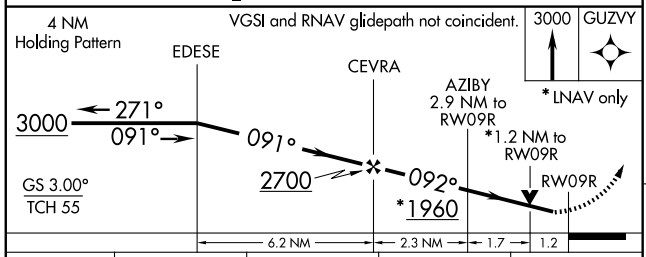
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LNAV/VNAV all Cats visibility to 2 miles, increase LNAV Cat C visibility to RVR 5000, Cat D visibility to RVR 6000, and Circling Cat C/D visibility ½ mile. For inoperative MALSR increase LNAV Cats A/B visibility to RVR 5000. For inoperative MALSR when using Coleman A. Young Muni altimeter setting; increase LPV all Cats, and LNAV Cats A/B visibility to RVR 5000. Baro-VNAV and VDP NA when using Coleman A. Young Muni altimeter setting.

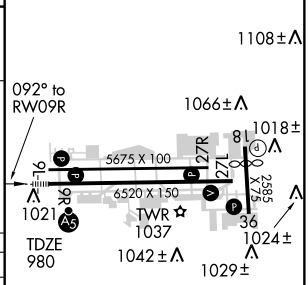
MALSR

MISSED APPROACH: Climb to 3000 direct GUZVY and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER ★	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF)	121.9	118.25	122.95







CATEGORY	A	B	C	D
LPV DA	1180/24 200 (200-½)			
LNAV/VNAV DA	1579-1½ 599 (600-1½)			
LNAV MDA	1420/40 440 (500-¾)			1420/50 440 (500-1)
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)

HIRL Rwy 9R-27L
MIRL Rwy 9L-27R
REIL Rwys 9L and 27L
REIL Rwy 27R

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 70615 W27A	APP CRS 272°	Rwy ldg 6520 TDZE 974 Apt Elev 980

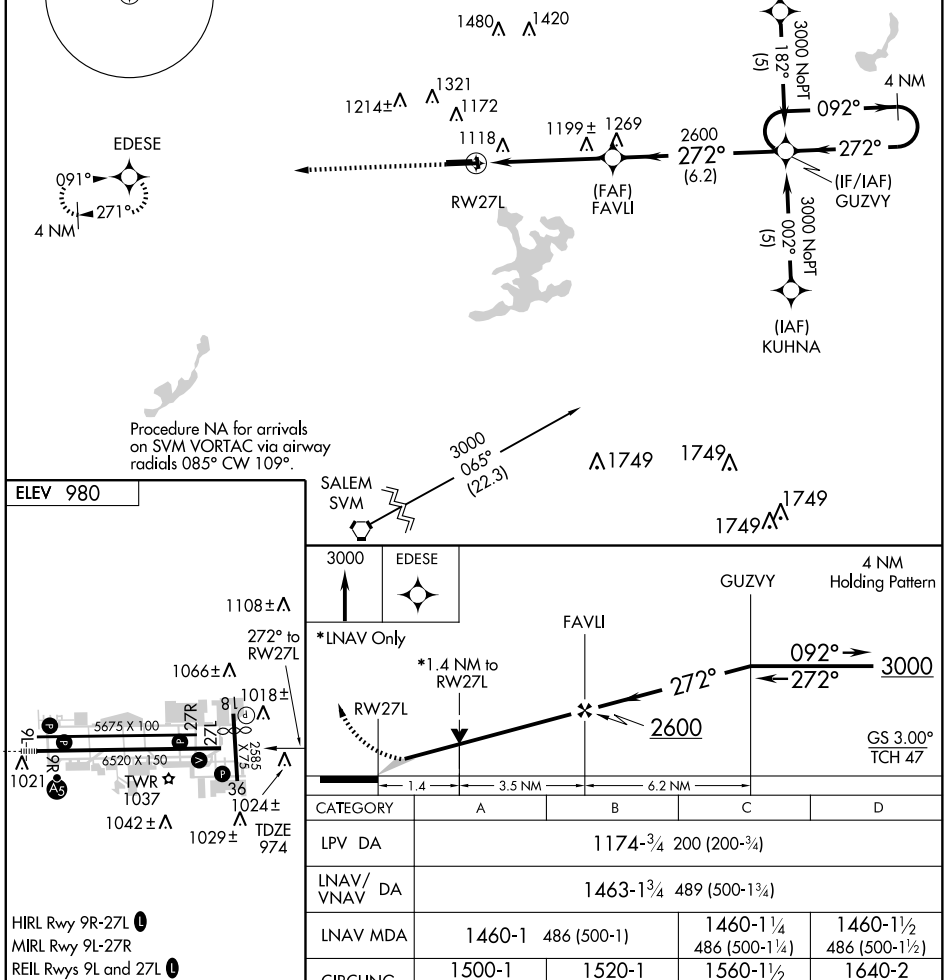
RNAV (GPS) RWY 27L

PONTIAC/OAKLAND COUNTY INTL (PTK)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LPV and LNAV/VNAV all Cats visibility ¼ mile, LNAV Cat C/D, and Circling Cat C/D visibility ½ mile. Baro-VNAV and VDP NA when using Coleman A. Young Muni altimeter setting.

MISSED APPROACH: Climb to 3000 direct EDESE and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER★	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF) A5	121.9	118.25	122.95 L

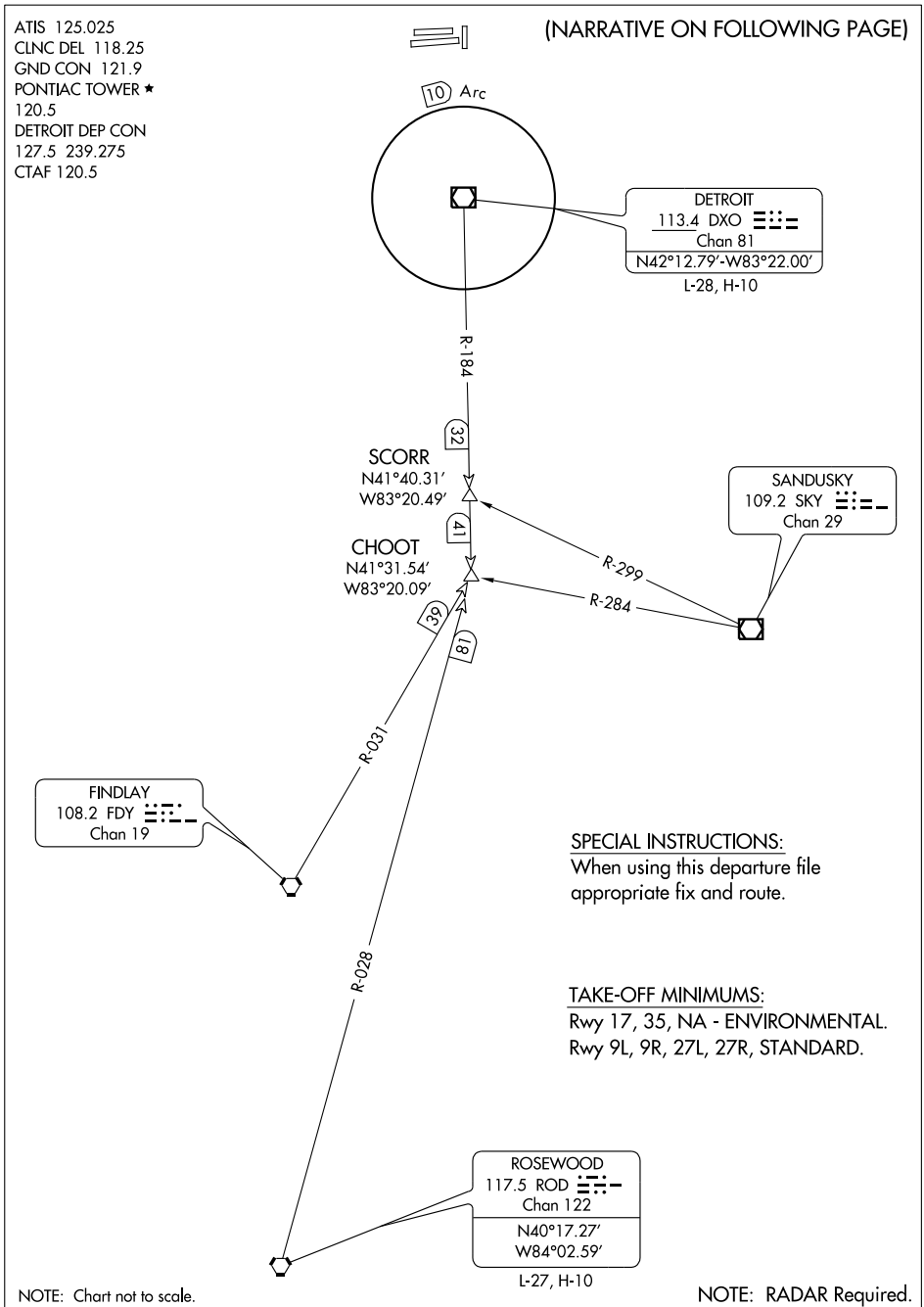


CATEGORY	A	B	C	D
LPV DA	1174-¾ 200 (200-¾)			
LNAV/VNAV DA	1463-1¾ 489 (500-1¾)			
LNAV MDA	1460-1 486 (500-1)		1460-1¼ 486 (500-1¼)	1460-1½ 486 (500-1½)
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)

ROSEWOOD TWO DEPARTURE

SL-5052 (FAA)

PONTIAC/ OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN



EC-1, 14 JAN 2010 to 11 FEB 2010

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

TAKE-OFF OBSTACLES:

Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL. Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.

Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL. Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.

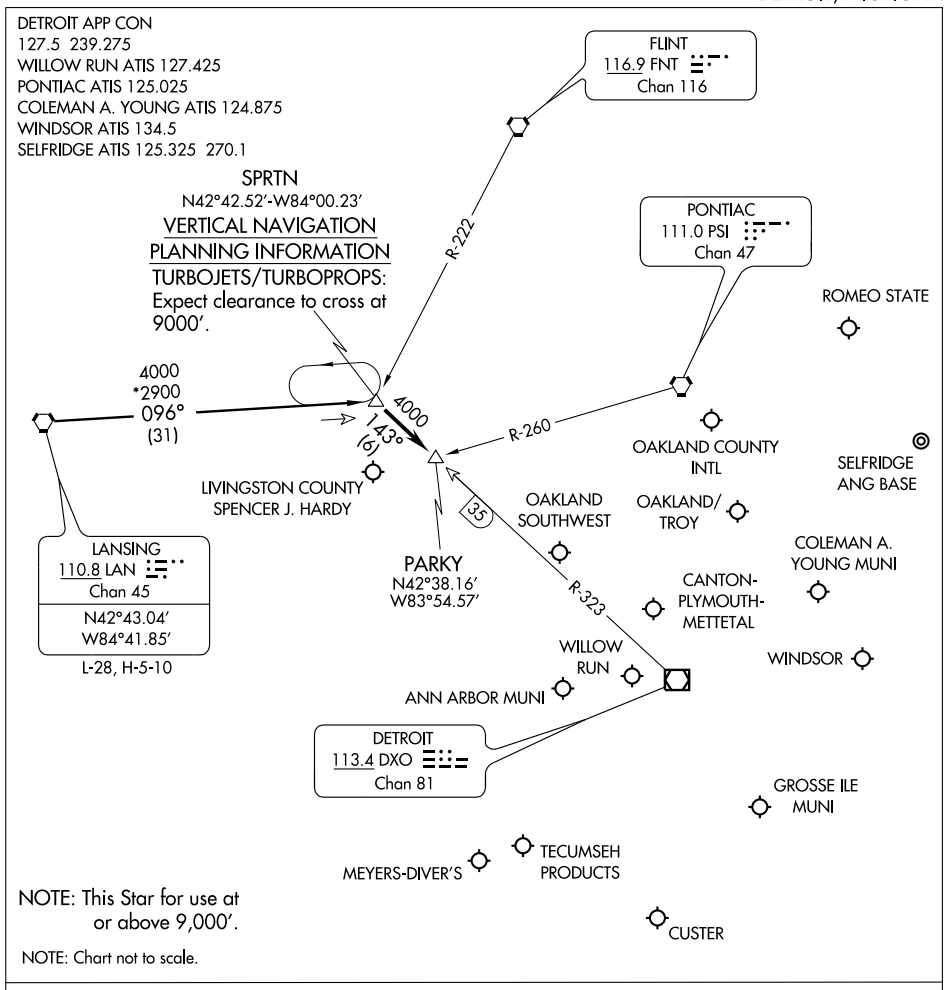
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1

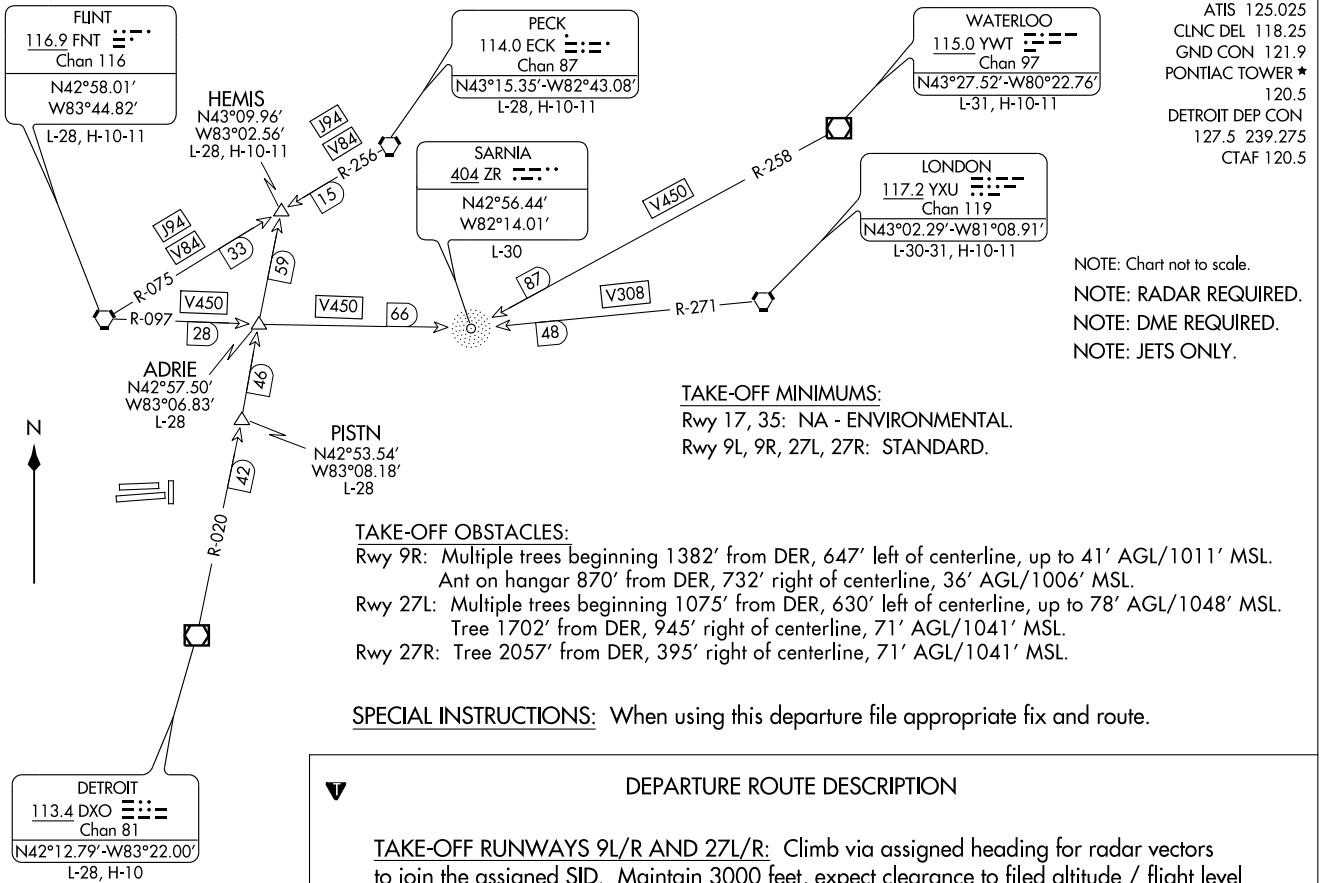


NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010



ATIS 125.025
CLNC DEL 118.25
GND CON 121.9
PONTIAC TOWER ★
120.5
DETROIT DEP CON
127.5 239.275
CTAF 120.5

NOTE: Chart not to scale.

NOTE: RADAR REQUIRED.

NOTE: DME REQUIRED.

NOTE: JETS ONLY.

TAKE-OFF MINIMUMS:
Rwy 17, 35: NA - ENVIRONMENTAL.
Rwy 9L, 9R, 27L, 27R: STANDARD.

TAKE-OFF OBSTACLES:
Rwy 9R: Multiple trees beginning 1382′ from DER, 647′ left of centerline, up to 41′ AGL/1011′ MSL.
Ant on hangar 870′ from DER, 732′ right of centerline, 36′ AGL/1006′ MSL.
Rwy 27L: Multiple trees beginning 1075′ from DER, 630′ left of centerline, up to 78′ AGL/1048′ MSL.
Tree 1702′ from DER, 945′ right of centerline, 71′ AGL/1041′ MSL.
Rwy 27R: Tree 2057′ from DER, 395′ right of centerline, 71′ AGL/1041′ MSL.

SPECIAL INSTRUCTIONS: When using this departure file appropriate fix and route.

DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RUNWAYS 9L/R AND 27L/R: Climb via assigned heading for radar vectors to join the assigned SID. Maintain 3000 feet, expect clearance to filed altitude / flight level ten (10) minutes after departure.

ST. CLAIR THREE DEPARTURE

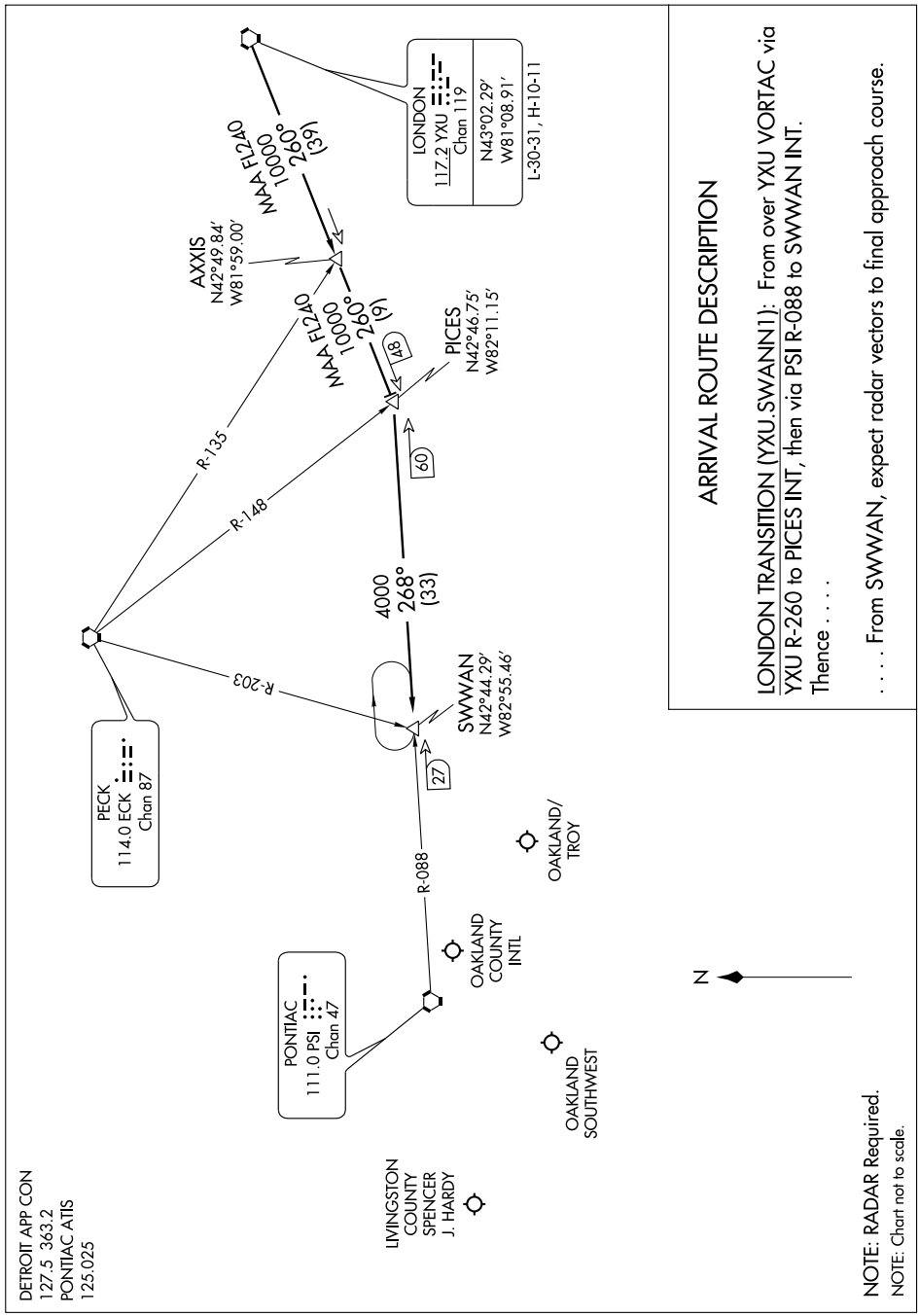
(SCLR3.DXO) 09127

SL-5052 (FAA)

PONTIAC/ OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

SWWAN ONE ARRIVAL

PONTIAC, MICHIGAN



VORTAC PSI	APP CRS	Rwy ldg	6520
111.0	119°	TDZE	980
Chan 47		Apt Elev	980

VOR RWY 9R

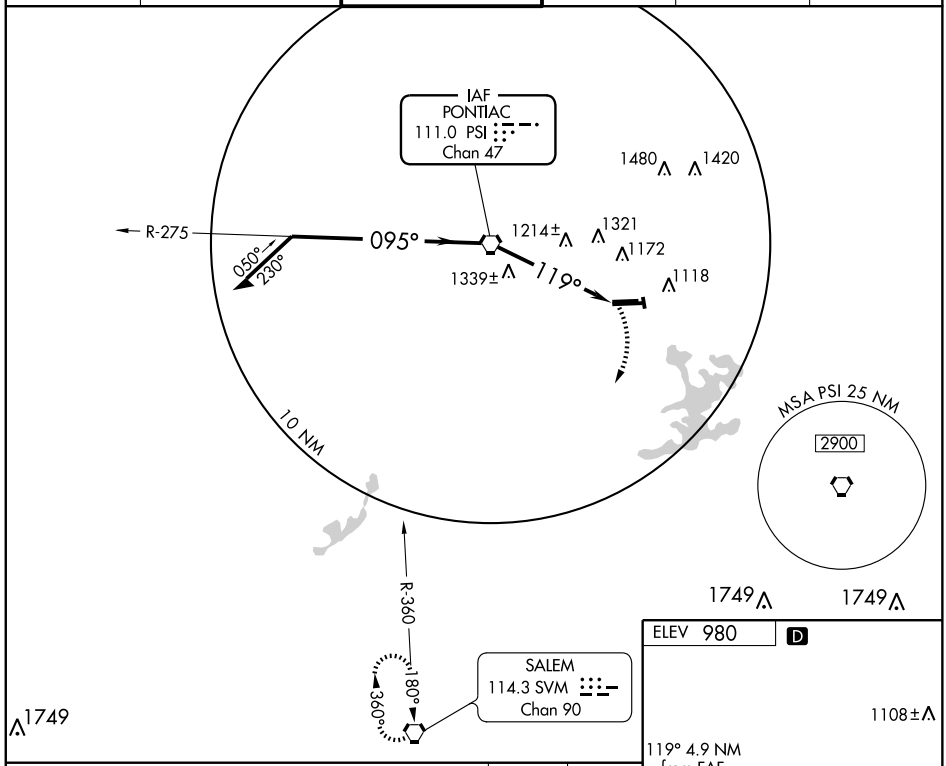
PONTIAC/OAKLAND COUNTY INTL (PTK)

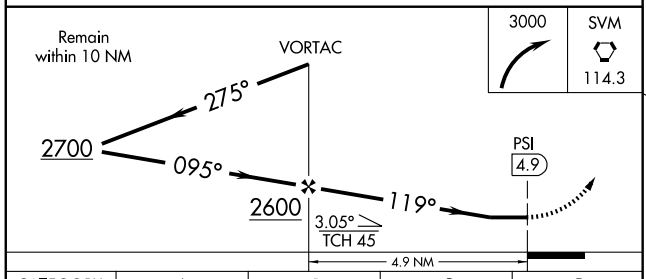
Inoperative table does not apply. Visibility reduction by helicopters NA.
When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all MDA 120 feet, increase S-9R Cat C/D and Circling Cat C visibility ¼ mile and Circling Cat D visibility ½ mile. Inoperative table does not apply, when using Coleman A. Young Muni altimeter setting.

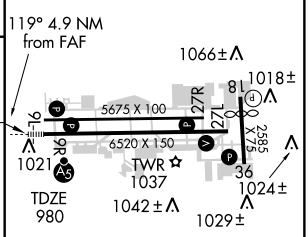
MALSR

MISSED APPROACH: Climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER★	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF)	121.9	118.25	122.95







HIRL Rwy 9R-27L
MIRL Rwy 9L-27R
REIL Rwys 9L and 27L
REIL Rwy 27R

CATEGORY	A	B	C	D
S-9R	1600/50 620 (700-1)		1600-1¾ 620 (700-1¾)	1600-2 620 (700-2)
CIRCLING	1600-1 620 (700-1)		1600-1¾ 620 (700-1¾)	1640-2 660 (700-2)

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

VORTAC PSI	APP CRS	Rwy ldg	6520
111.0	294°	TDZE	974
Chan 47		Apt Elev	980

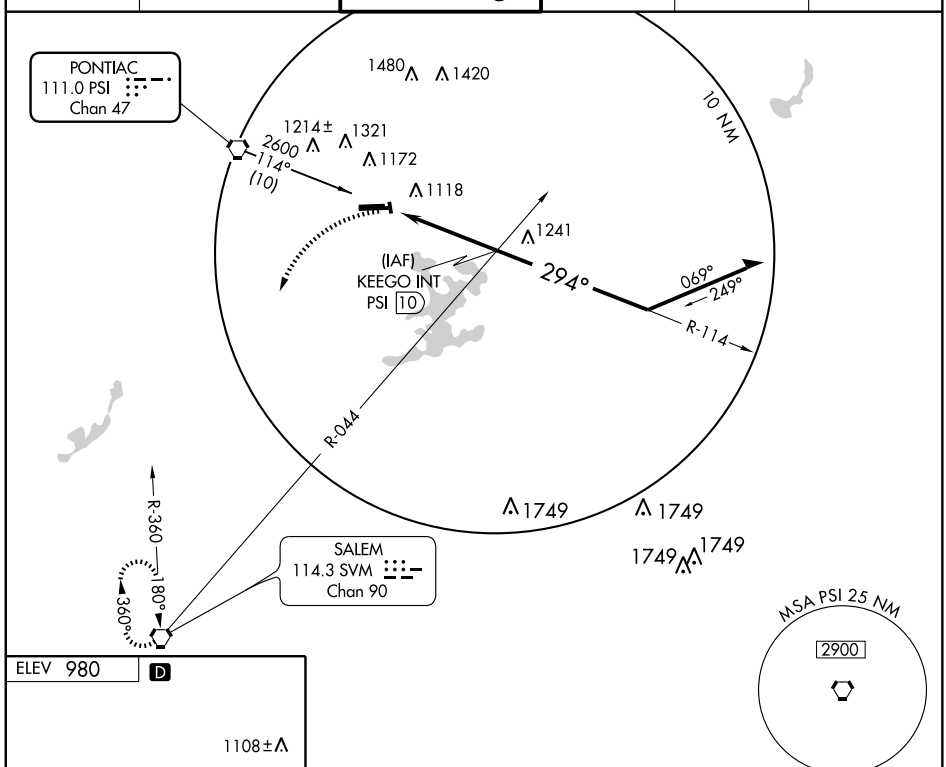
VOR RWY 27L

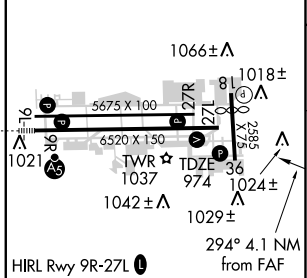
PONTIAC/OAKLAND COUNTY INTL (PTK)

Visibility reduction by helicopters NA. When local altimeter setting not received, use Coleman A. Young Muni altimeter setting and increase all MDA 120 feet, increase S-27L Cat C/D and Circling Cat C/D visibility ½ mile.

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

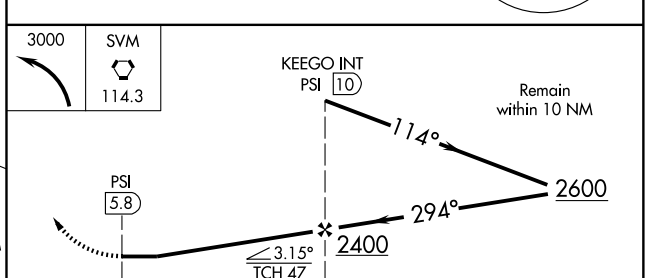
ATIS	DETROIT APP CON	PONTIAC TOWER*	GND CON	CLNC DEL	UNICOM
125.025	127.5 363.2	120.5 (CTAF)	121.9	118.25	122.95





HIRL Rwy 9R-27L
MIRL Rwy 9L-27R
REIL Rwys 9L and 27L
REIL Rwy 27R

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22



CATEGORY	A	B	C	D
S-27L	1460-1	486 (500-1)	1460-1¼ 486 (500-1¼)	1460-1½ 486 (500-1½)
CIRCLING	1500-1 520 (600-1)	1520-1 540 (600-1)	1560-1½ 580 (600-1½)	1640-2 660 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-PHN	APP CRS	Rwy ldg	5104
110.9	043°	TDZE	648
		Apt Elev	650

ILS RWY 4

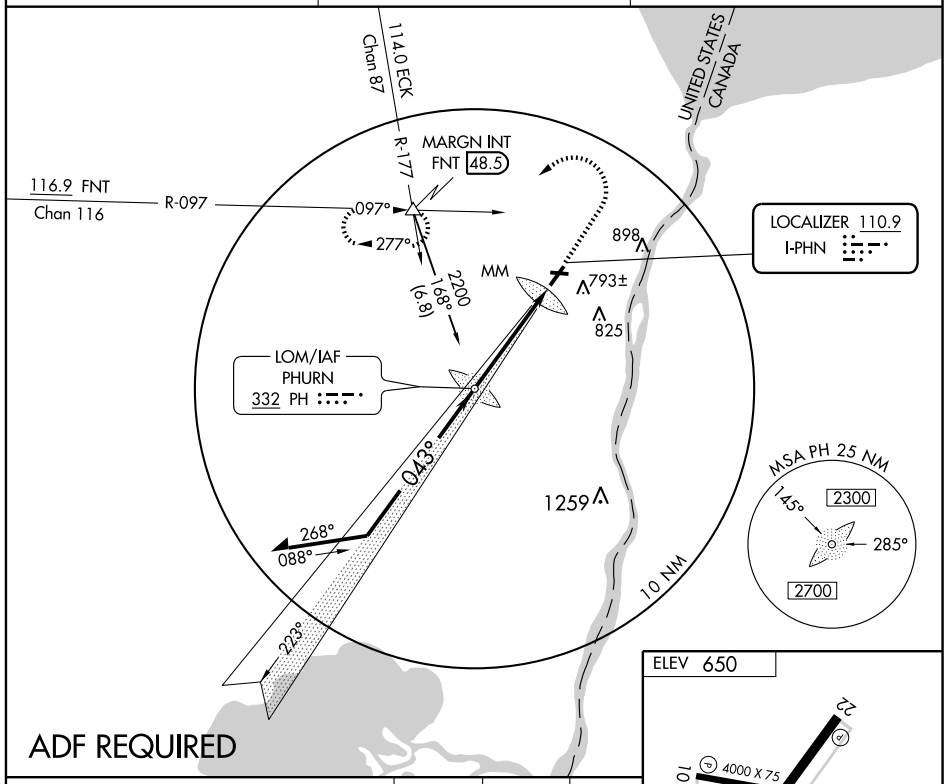
PORT HURON / ST. CLAIR COUNTY INTL (PHN)

NA

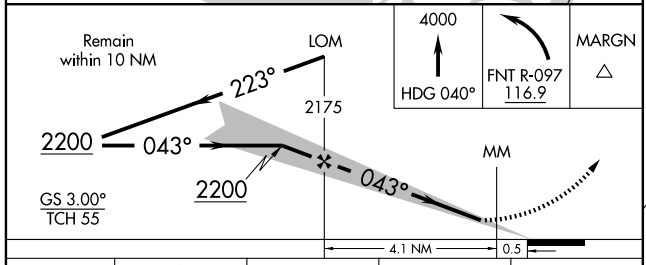
MALSR

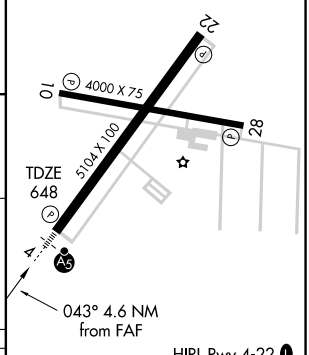
MISSED APPROACH: Climb to 4000 via heading 040° then left turn via FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 395.9	123.05 (CTAF) L



ADF REQUIRED





HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

CATEGORY	A	B	C	D
S-ILS 4	848-½ 200 (200-½)			
S-LOC 4	1140-½ 492 (500-½)		1140-¾ 492 (500-¾)	1140-2 492 (500-2)
CIRCLING	1140-1 490 (500-1)		1140-1½ 490 (500-1½)	1200-2 550 (600-2)

FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

LOM PH	APP CRS	Rwy ldg	5104
332	043°	TDZE	648
		Apt Elev	650

NDB or GPS RWY 4

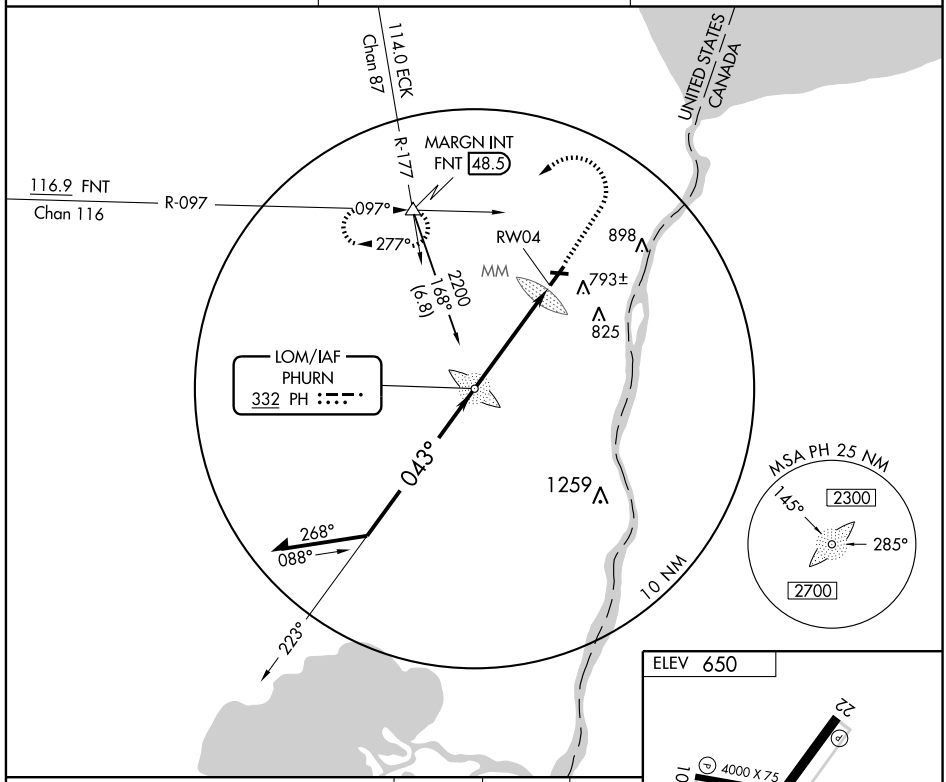
PORT HURON / ST. CLAIR COUNTY INTL (PHN)

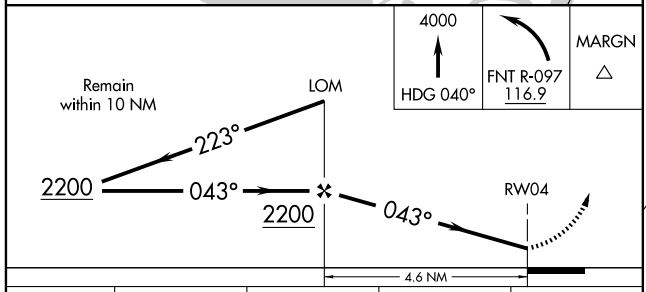
NA

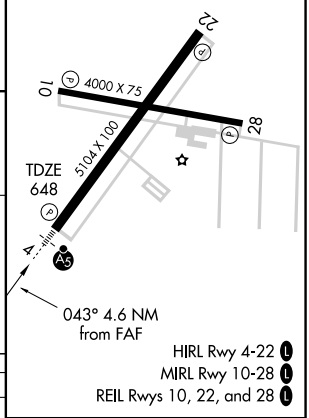
MALSR

MISSED APPROACH: Climb to 4000 via heading 040° then left turn via FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 395.9	123.05 (CTAF) L







CATEGORY	A	B	C	D
S-4	1180-¾ 532 (600-¾)		1180-1 532 (600-1)	1180-1½ 530 (600-1½)
CIRCLING	1180-1 530 (600-1)		1180-1½ 530 (600-1½)	1200-2 550 (600-2)

FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

EC-1. 14 JAN 2010 to 11 FEB 2010

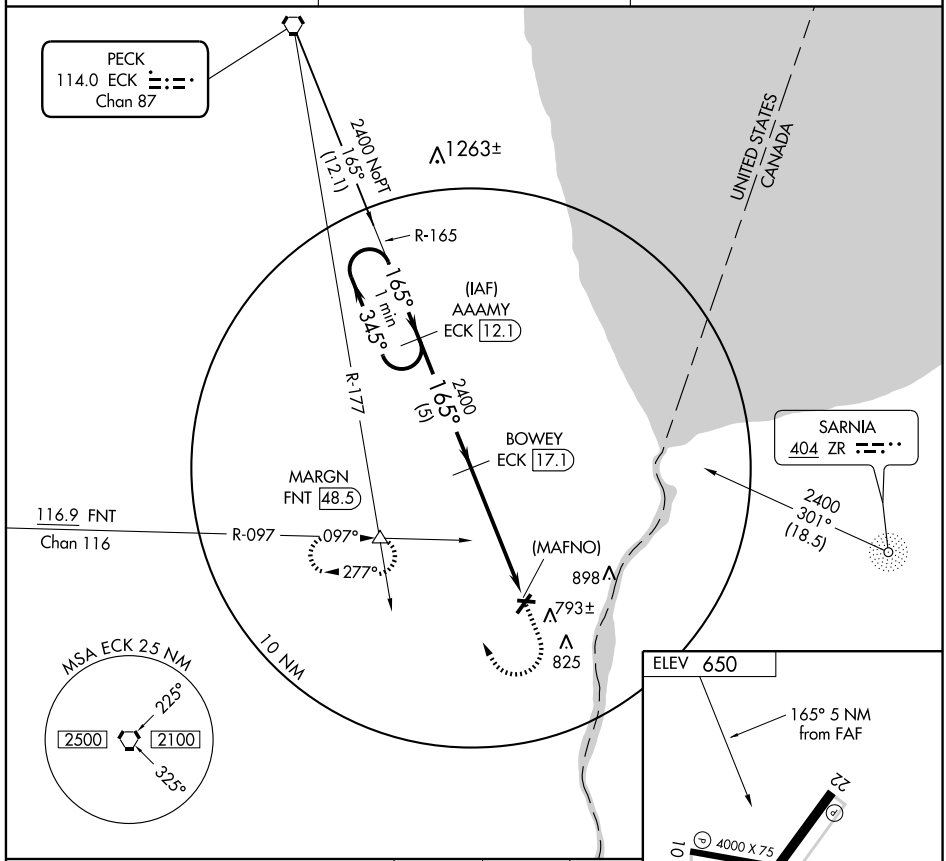
VORTAC ECK 114.0 Chan 87	APP CRS 165°	Rwy ldg N/A TDZE N/A Apt Elev 650

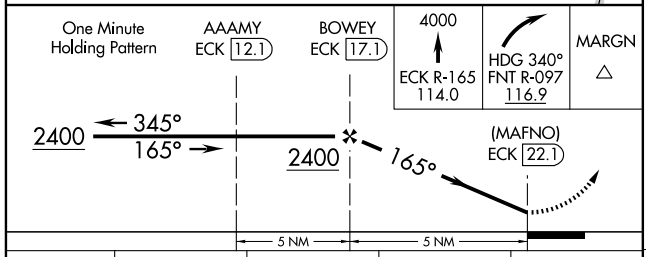
VOR/DME or GPS-A

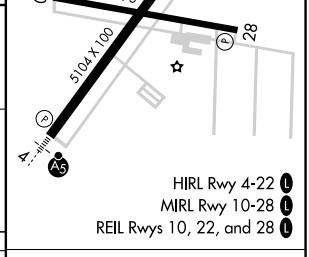
PORT HURON / ST. CLAIR COUNTY INTL (PHN)

MISSED APPROACH: Climb to 4000 via ECK R-165 then right turn heading 340° and FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 395.9	123.05 (CTAF) L







HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

CATEGORY	A	B	C	D
CIRCLING	1140-1 490 (500-1)	1140-1¼ 490 (500-1¼)	1140-1½ 490 (500-1½)	1200-2 550 (600-2)

Knots	60	90	120	150	180
Min:Sec					

EC-1. 14 JAN 2010 to 11 FEB 2010

PORT HURON, MICHIGAN

AL-5445 (FAA)

VORTAC ECK 114.0 Chan 87	APP CRS 223°	Rwy ldg 5104 TDZE 649 Apt Elev 650

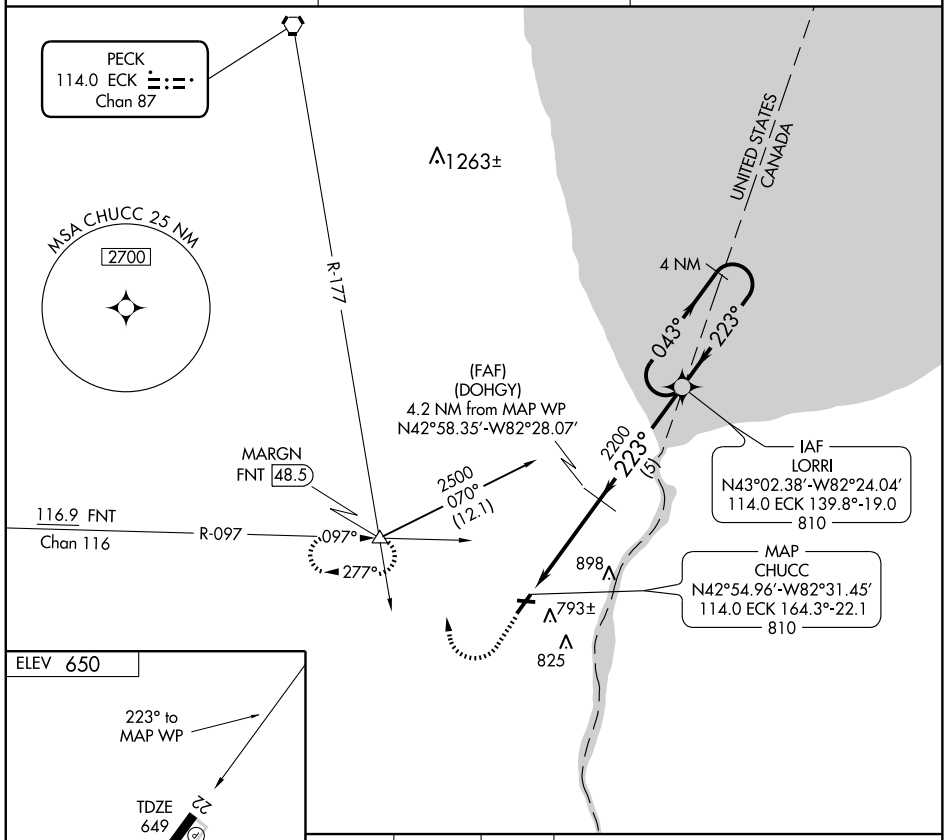
VOR/DME RNAV or GPS RWY 22

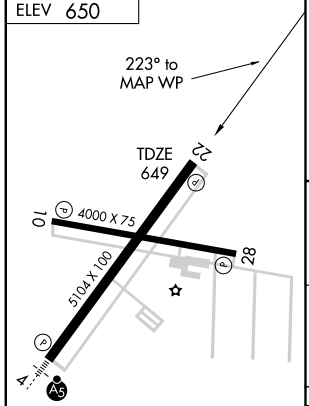
PORT HURON / ST. CLAIR COUNTY INTL (PHN)

NA

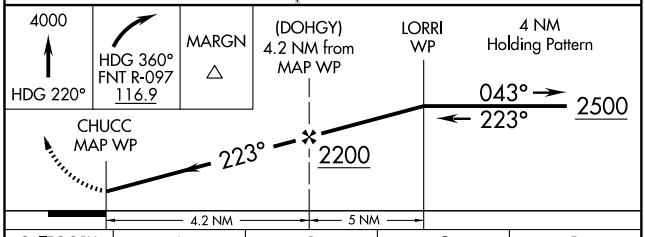
MISSED APPROACH: Climb to 4000 via heading 220° then right turn via heading 360° and FNT VORTAC R-097 to MARGN Int/FNT 48.5 DME and hold.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 395.9	123.05 (CTAF) L





HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L



CATEGORY	A	B	C	D
S-22	1220-1 571 (600-1)		1220-1½ 571 (600-1½)	1220-1¾ 571 (600-1¾)
CIRCLING	1220-1 570 (600-1)		1220-1½ 570 (600-1½)	1220-2 570 (600-2)

EC-1, 14 JAN 2010 to 11 FEB 2010

NDB PZQ	APP CRS	Rwy ldg	3725
215	266°	TDZE	670
		Apt Elev	670

NDB RWY 27

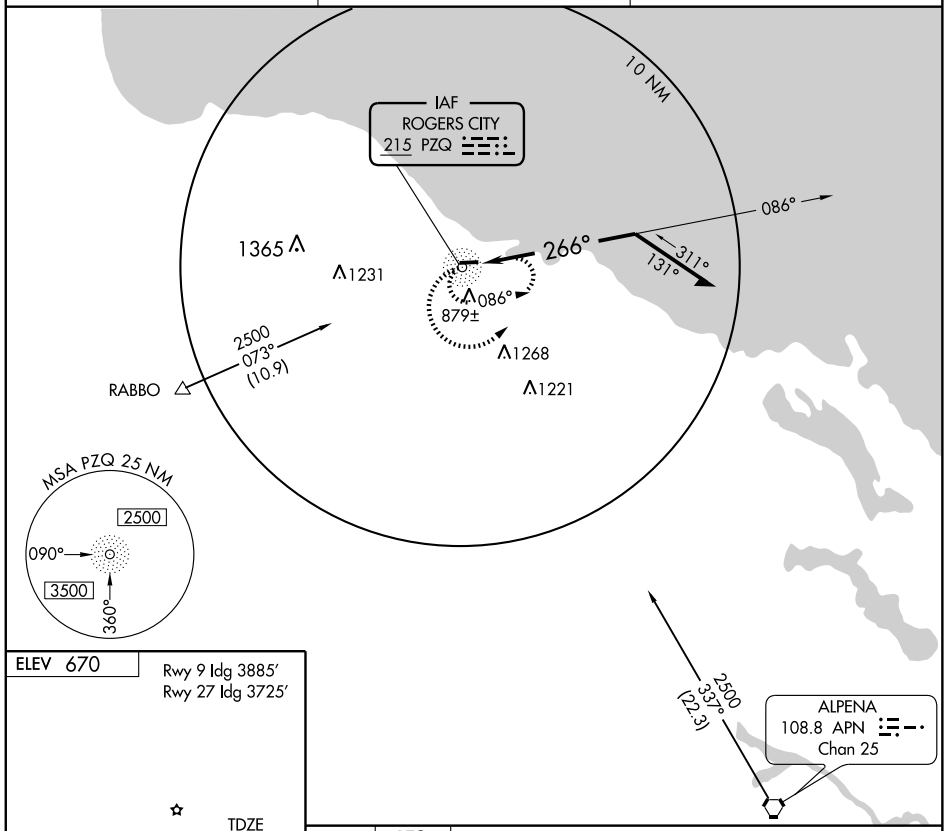
ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)

NA

If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet.

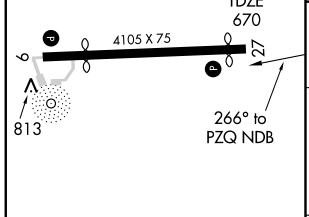
MISSED APPROACH: Climbing left turn to 2500 in PZQ NDB holding pattern.

AWOS-3	ALPENA APP CON ★		CTAF
118.125	128.425	379.3	122.9 L



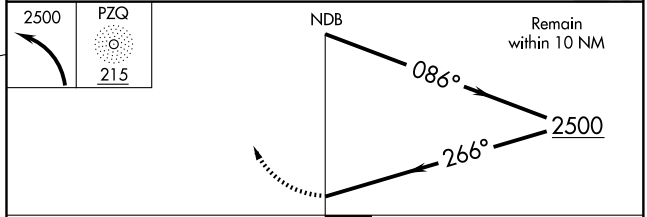
ELEV 670

Rwy 9 ldg 3885′
Rwy 27 ldg 3725′



REIL Rwy 9 and 27 L
MIRL Rwy 9-27 L

Knots	60	90	120	150	180
Min:Sec					



CATEGORY	A	B	C	D
S-27	1240-1 570 (600-1)		1240-1½ 570 (600-1½)	NA
CIRCLING	1240-1 570 (600-1)		1240-1½ 570 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3885
095°	TDZE	669
	Apt Elev	670

RNAV (GPS) RWY 9

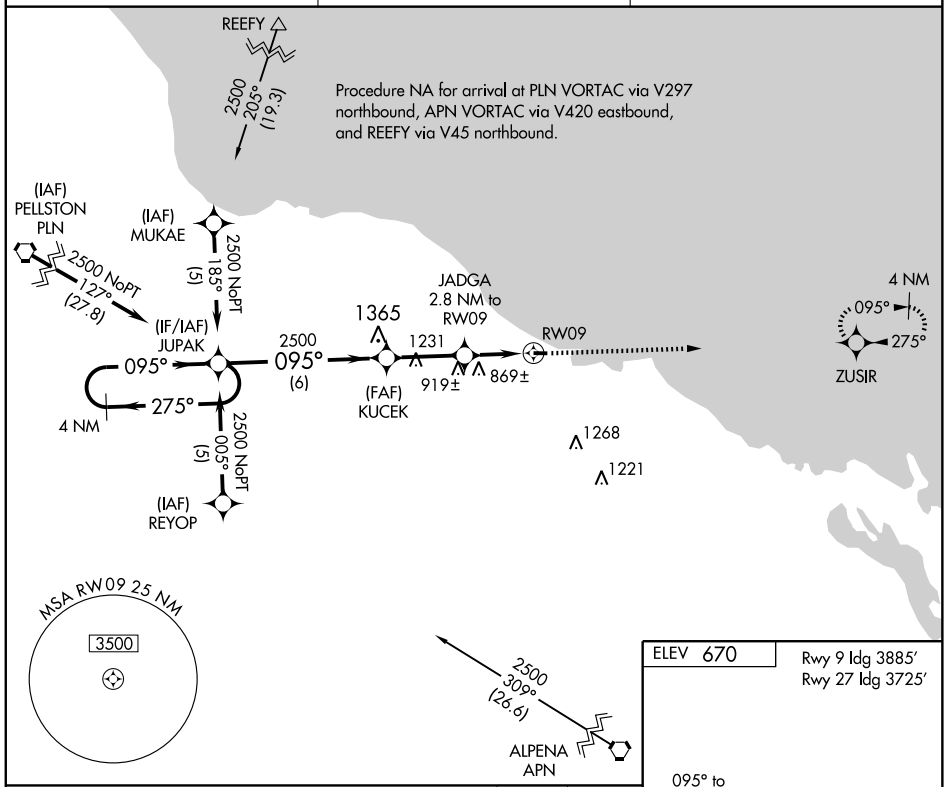
ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)

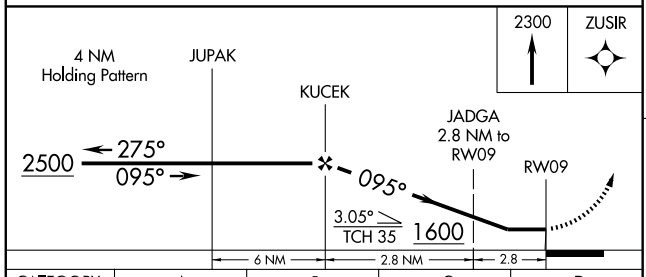
NA

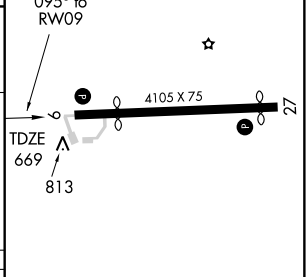
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet. When VGSI inop, straight-in/circling Rwy 9 NA at night.

MISSED APPROACH: Climb to 2300 direct ZUSIR and hold.

AWOS-3	ALPENA APP CON ★		CTAF
118.125	128.425	379.3	122.9 L







CATEGORY	A	B	C	D
LNAV MDA	1120-1 451 (500-1)		1120-1¼ 451 (500-1¼)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1½ 550 (600-1½)	NA

REIL Rwy 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3725
275°	TDZE	670
	Apt Elev	670

RNAV (GPS) RWY 27

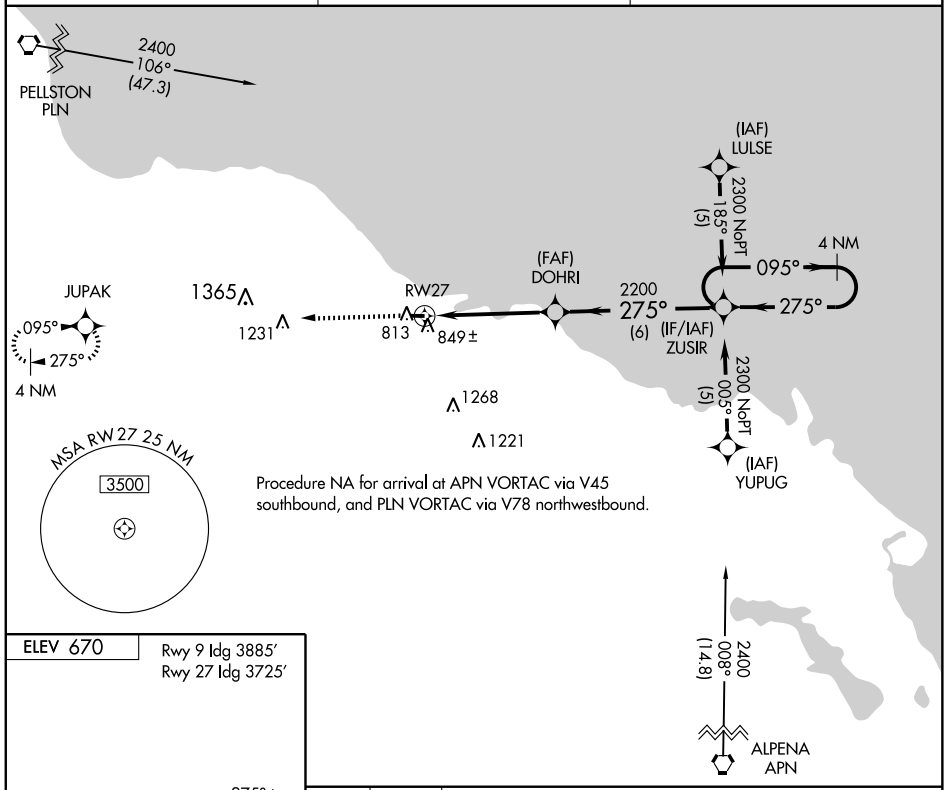
ROGERS CITY / PRESQUE ISLE COUNTY (PZQ)

NA

DME/DME RNP-0.3 NA. Circling NA at night to Rwy 9. If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet. VDP NA with Alpena County Rgnl altimeter setting.

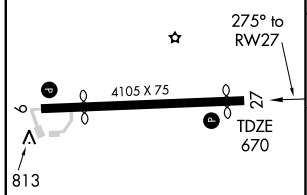
MISSED APPROACH: Climb to 2500 direct JUPAK and hold.

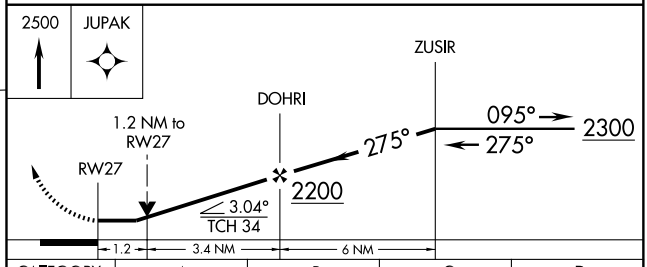
AWOS-3	ALPENA APP CON ★	CTAF
118.125	128.425 379.3	122.9 L



ELEV 670

Rwy 9 ldg 3885′
Rwy 27 ldg 3725′





CATEGORY	A	B	C	D
LNAV MDA	1100-1 430 (500-1)		1100-1¼ 430 (500-1¼)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1½ 550 (600-1½)	NA

REIL Rwy 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
184°	TDZE	739
	Apt Elev	739

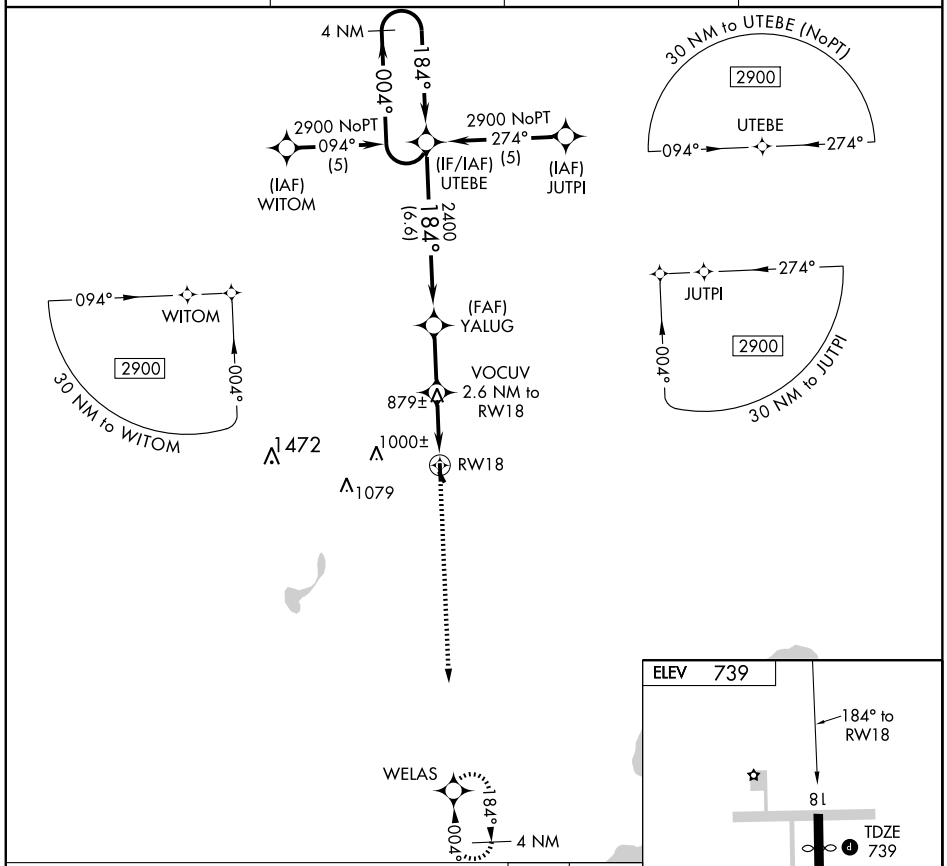
RNAV (GPS) RWY 18
ROMEO STATE (D98)

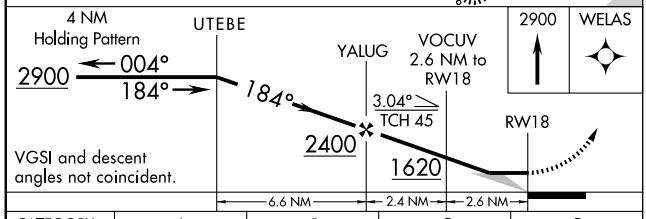
DME/DME RNP-0.3 NA.
Use Coleman A. Young Muni altimeter setting, if not received use Pontiac altimeter setting and increase all MDA 20 feet.

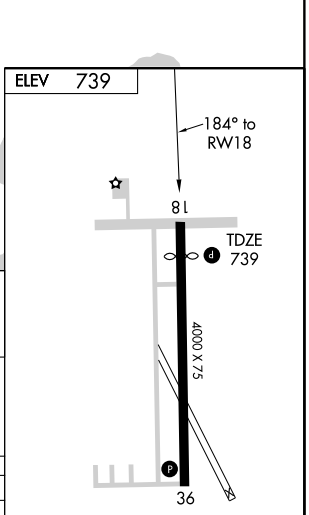
NA

MISSED APPROACH: Climb to 2900 direct WELAS and hold.

COLEMAN A. YOUNG MUNI ASOS	SELFRIDGE APP CON ★	GCO	UNICOM
124.875	119.6 395.9	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1200-1 461 (500-1)		1200-1¼ 461 (500-1¼)	1200-1½ 461 (500-1½)
CIRCLING	1280-1 541 (600-1)		1280-1½ 541 (600-1½)	1420-2¼ 681 (700-2¼)

MIRL Rwy 18-36 L
REIL Rwys 18 and 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
004°	TDZE	736
	Apt Elev	739

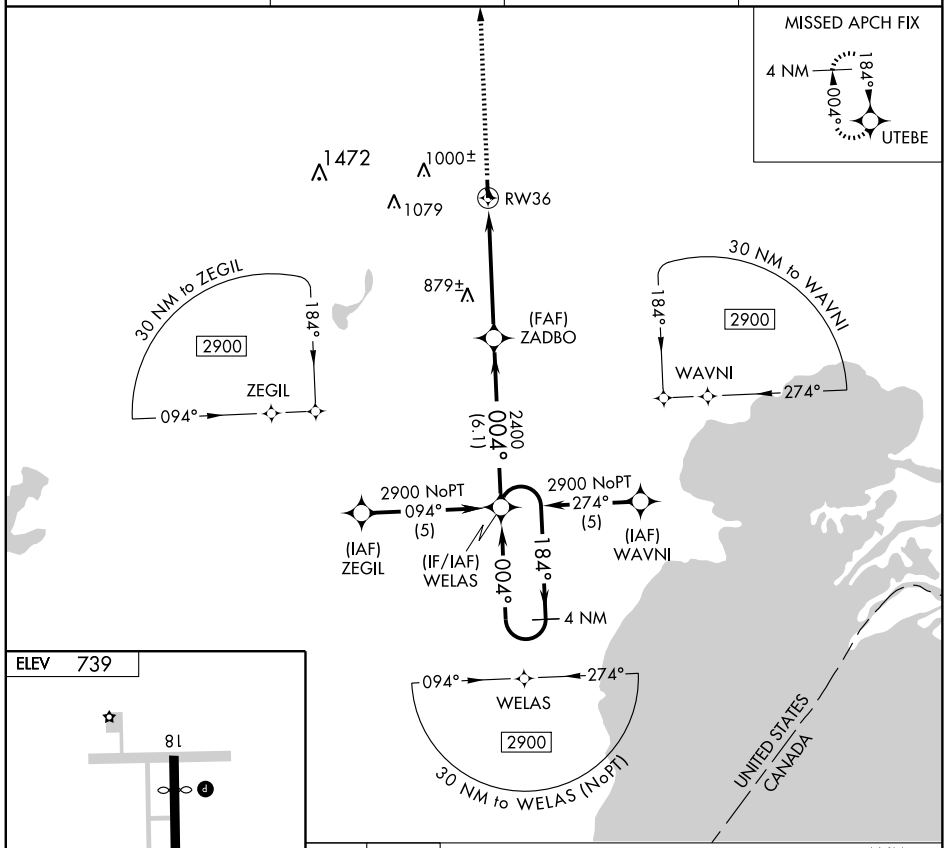
RNAV (GPS) RWY 36
ROMEO STATE (D98)

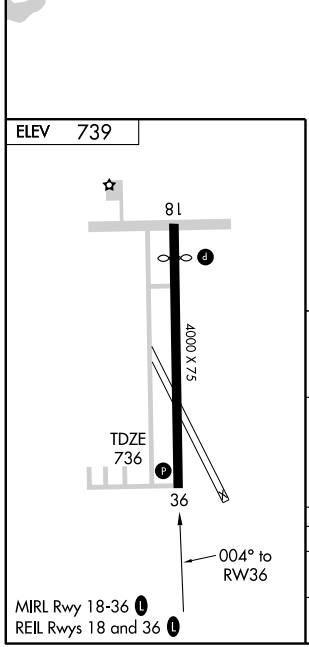
NA

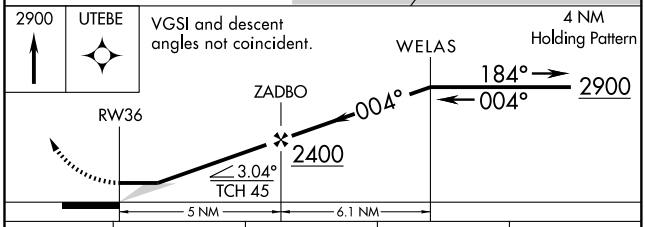
DME/DME RNP-0.3 NA.
Use Coleman A. Young Muni altimeter setting, if not received use Pontiac altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climb to 2900 direct UTEBE and hold.

COLEMAN A. YOUNG MUNI ASOS	SELFRIDGE APP CON ★	GCO	UNICOM
124.875	119.6 395.9	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1200-1 464 (500-1)		1200-1¼ 464 (500-1¼)	1200-1½ 464 (500-1½)
CIRCLING	1280-1 541 (600-1)		1280-1½ 541 (600-1½)	1420-2¼ 681 (700-2¼)

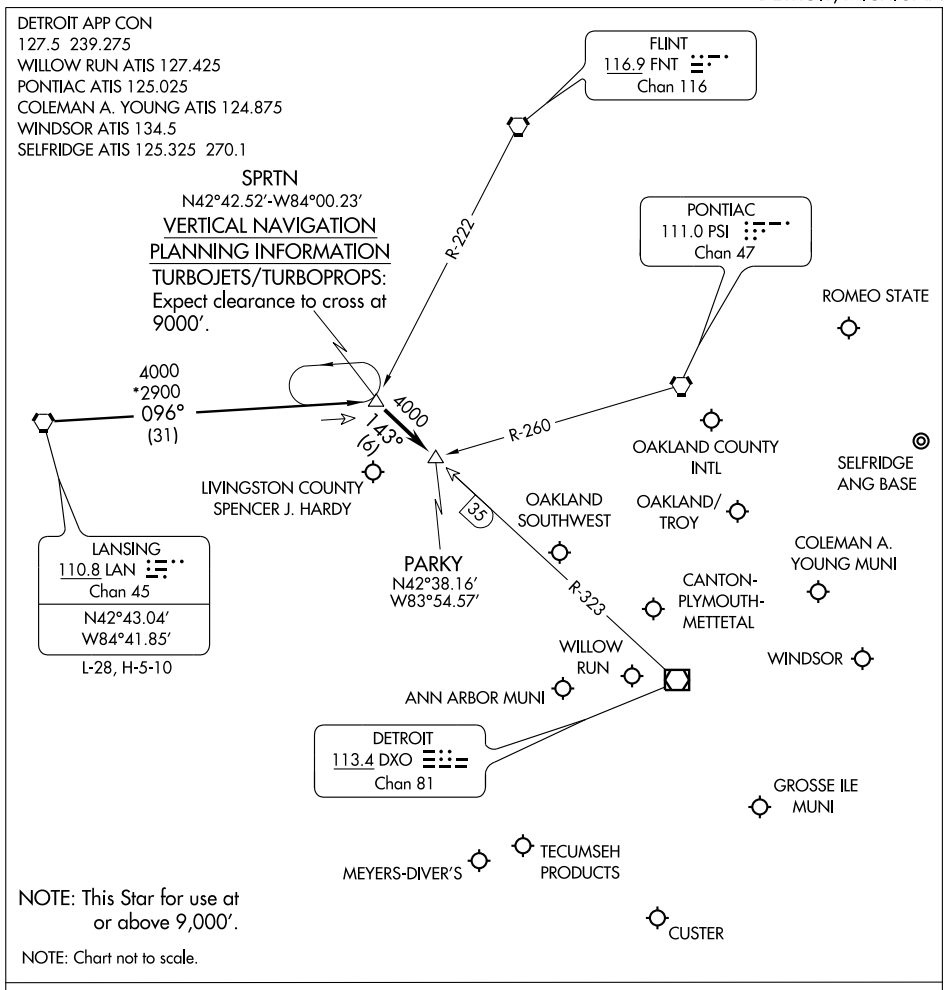
EC-1. 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

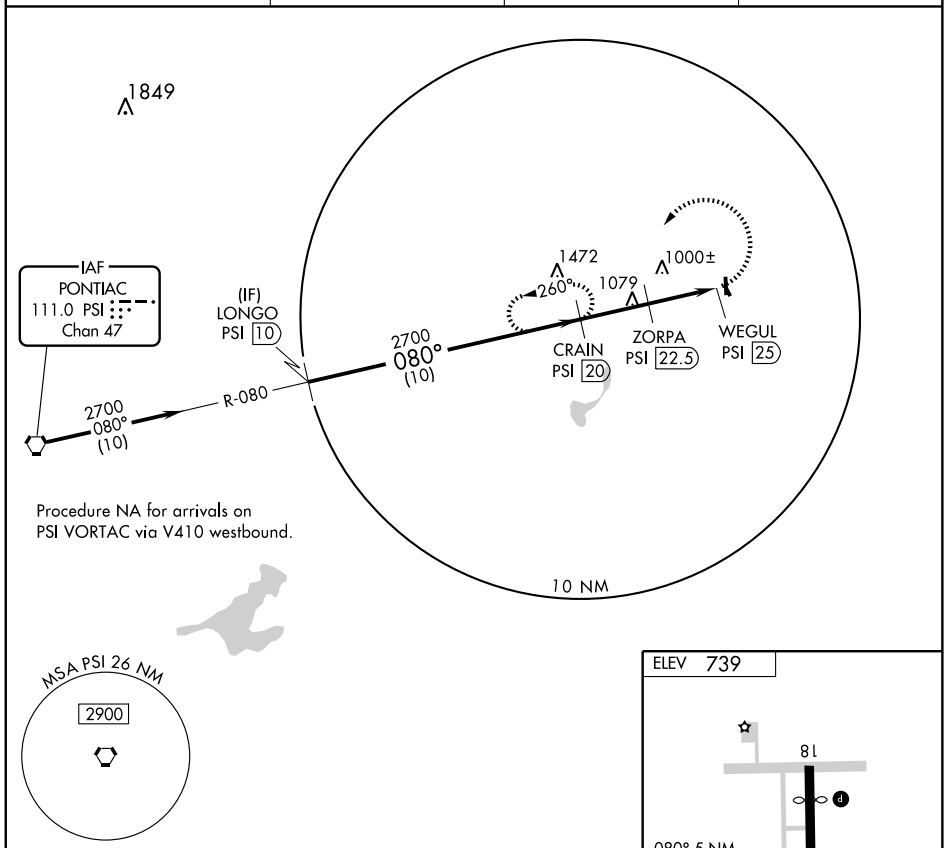
VORTAC PSI 111.0 Chan 47	APP CRS 080°	Rwy ldg N/A TDZE N/A Apt Elev 739

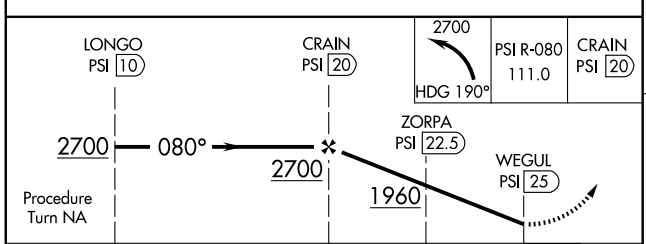
VOR/DME-A
ROMEO STATE (D98)

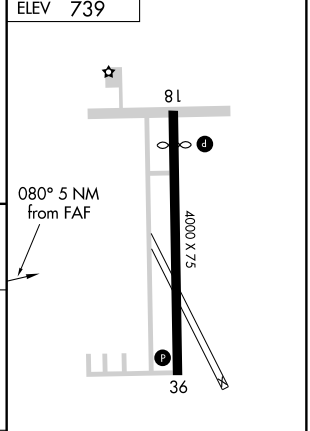
NA Use Coleman A. Young Muni altimeter setting, if not received use Pontiac altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climbing left turn to 2700 via heading 190° and PSI VORTAC R-080 to CRAIN/20 DME and hold.

COLEMAN A. YOUNG MUNI ASOS	SELFRIDGE APP CON ★	GCO	UNICOM
124.875	119.6 395.9	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
CIRCLING	1380-1 641 (700-1)	1380-1¼ 641 (700-1¼)	1380-1¾ 641 (700-1¾)	1420-2¼ 681 (700-2¼)

MIRL Rwy 18-36 L
REIL Rwys 18 and 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

SAGINAW, MICHIGAN

LOC/DME I-HQW	APP CRS	Rwy ldg	5000
111.35	274°	TDZE	600
Chan 50 (Y)		Apt Elev	601

AL-6474 (FAA)

ILS or LOC/DME RWY 27

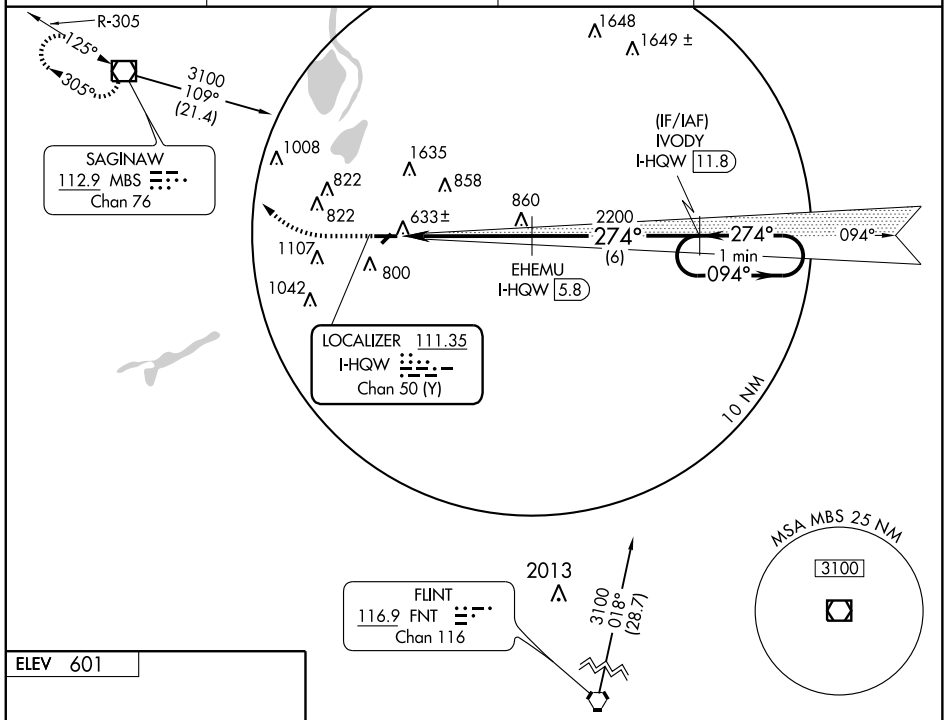
SAGINAW COUNTY H. W. BROWNE (HYX)

When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all DA 36 feet, increase all MDA 40 feet. VDP NA when using MBS Intl altimeter setting.

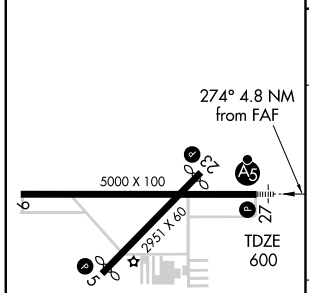
MALSR

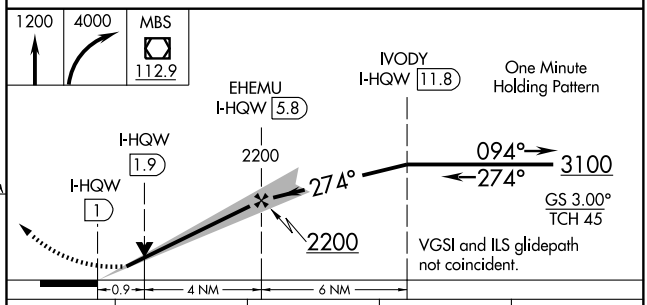
MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 direct MBS VOR/DME and hold, continue climb-in-hold to 4000.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
118.325	120.95 235.625	121.725	122.8 (CTAF) L



ELEV 601





CATEGORY	A	B	C	D
S-ILS 27	800-½ 200 (200-½)			NA
S-LOC 27	900-½ 300 (300-½)			NA
CIRCLING	1100-1 499 (500-1)		1100-1½ 499 (500-1½)	NA

REIL Rwy 9 L
MIRL Rwys 5-23 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 50200 W09A	APP CRS 094°	Rwy ldg 5000 TDZE 600 Apt Elev 601

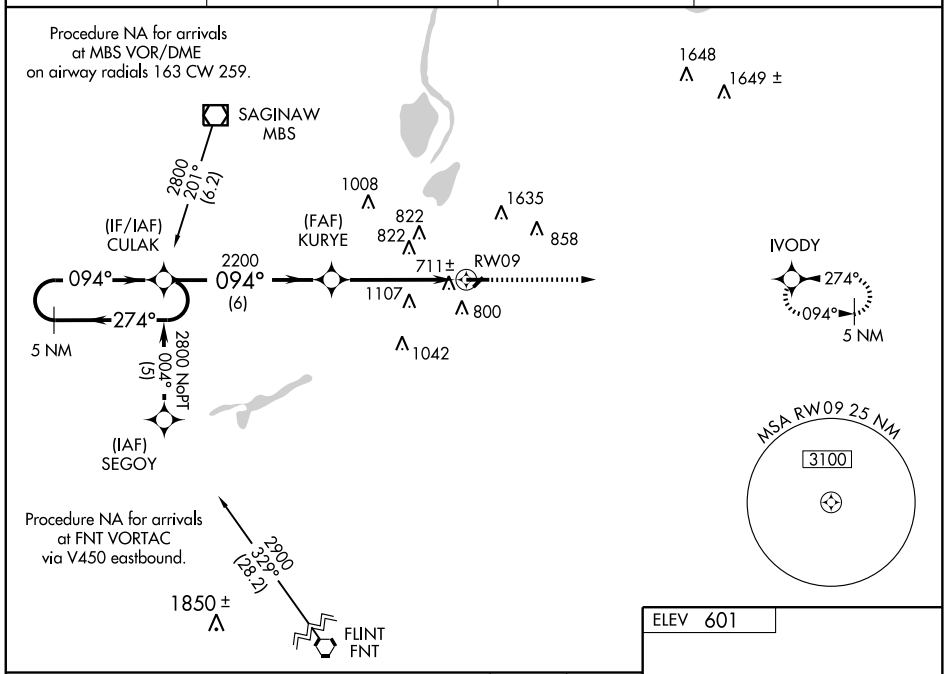
RNAV (GPS) RWY 9

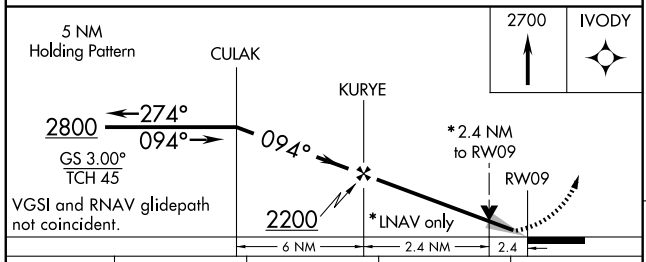
SAGINAW COUNTY H. W. BROWNE (HYX)

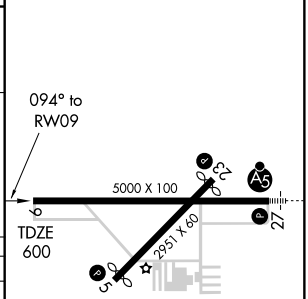
Circling to Rwy 5 NA at night. When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all DA 36 feet, increase LPV and LNAV/VNAV all Cats visibility ¼ mile, increase all MDA 40 feet, increase LNAV visibility Cat C ¼ mile and Circling visibility Cat C ¼ mile. VDP and Baro-VNAV NA when using Saginaw MBS Intl altimeter setting. For uncompensated Baro-VNAV system, procedure NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2700 direct IVODY and hold.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
118.325	120.95 235.625	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	850-¾ 250 (300-¾)			NA
LNAV/VNAV DA	1095-1¾ 495 (500-1¾)			NA
LNAV MDA	1380-1 780 (800-1)	1380-1¼ 780 (800-1¼)	1380-2¼ 780 (800-2¼)	NA
CIRCLING	1380-1 779 (800-1)	1380-1¼ 779 (800-1¼)	1380-2¼ 779 (800-2¼)	NA

REIL Rwy 9 L
MIRL Rwys 5-23 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

SAGINAW, MICHIGAN

WAAS CH 90200 W27A	APP CRS 274°	Rwy ldg 5000 TDZE 600 Apt Elev 601

AL-6474 (FAA)

RNAV (GPS) RWY 27

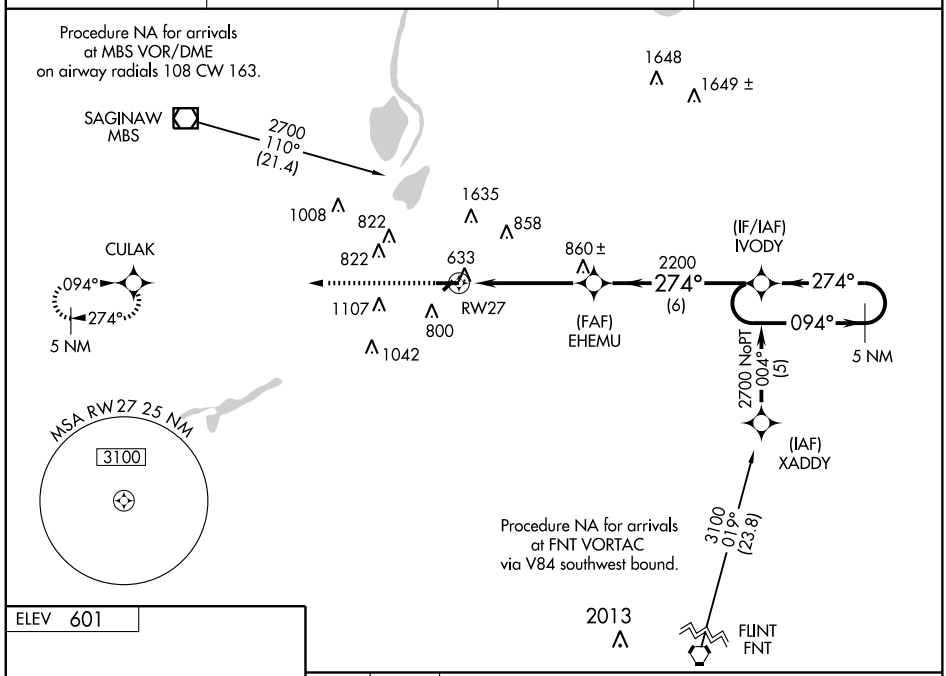
SAGINAW COUNTY H. W. BROWNE (HYX)

When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all DA 36 feet. Increase LNAV/VNAV all Cats visibility ¼ , increase all MDA 40 feet. Baro-VNAV and VDP NA when using Saginaw MBS Intl altimeter setting. For uncompensated Baro-VNAV system. Procedure NA below -16°C (4°F) or above 54°C (130°F). For inoperative MALSR increase LPV visibility to 1 all Cats. DME/DME RNP-0.3 NA.

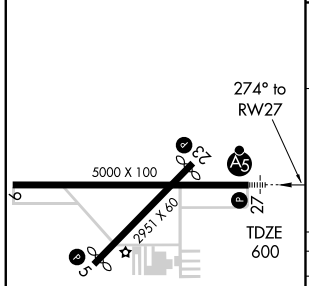
MALSR A5

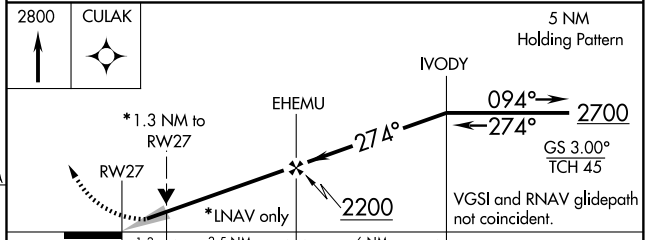
MISSED APPROACH: Climb to 2800 direct CULAK and hold.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
118.325	120.95 235.625	121.725	122.8 (CTAF) L



ELEV 601





CATEGORY	A	B	C	D
LPV DA	850-½ 250 (300-½)			NA
LNAV/VNAV DA	903-½ 303 (400-½)			NA
LNAV MDA	1040-½ 440 (500-½)		1040-¾ 440 (500-¾)	NA
CIRCLING	1100-1 499 (500-1)		1100-1½ 499 (500-1½)	NA

REIL Rwy 9 L
MIRL Rwys 5-23 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

SAGINAW, MICHIGAN

VOR/DME MBS	APP CRS	Rwy ldg	N/A
112.9	125°	TDZE	N/A
Chan 76		Apt Elev	600

AL-6474 (FAA)

VOR/DME or GPS-A

SAGINAW COUNTY H. W. BROWNE (HYX)

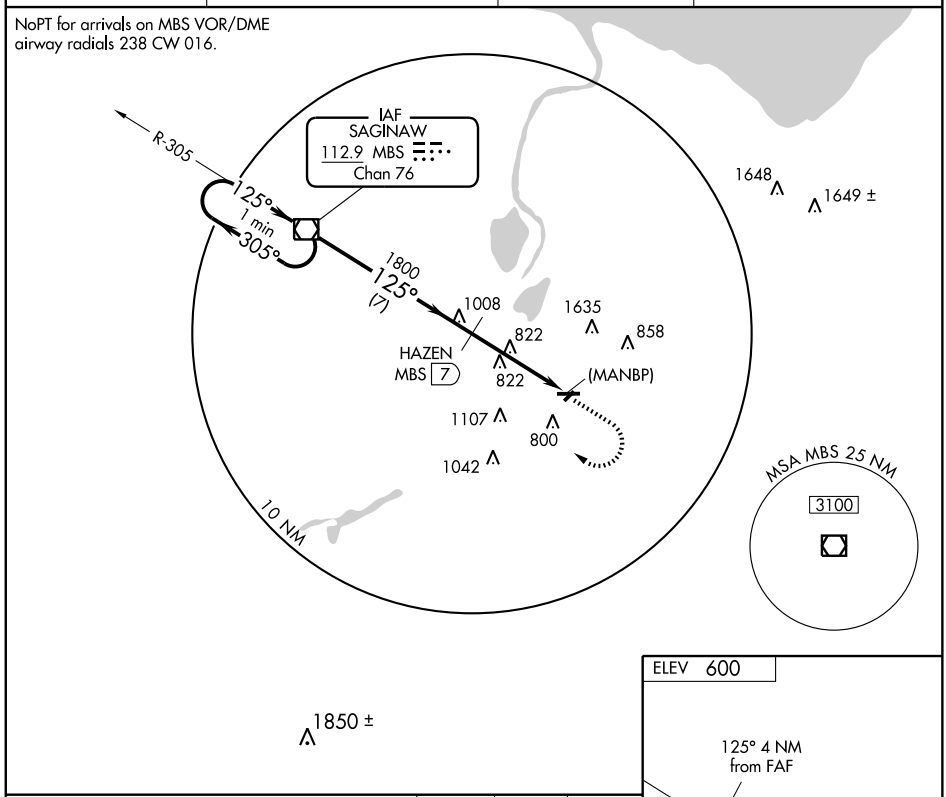
Obtain local altimeter setting on CTAF; when not available use Saginaw altimeter setting.

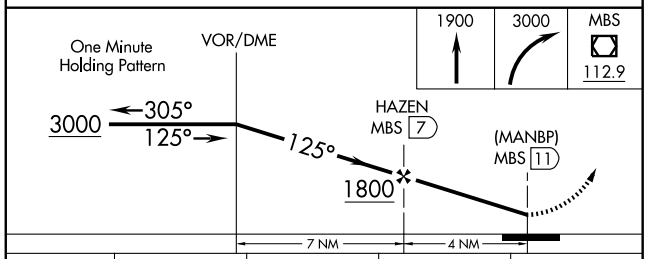
NA

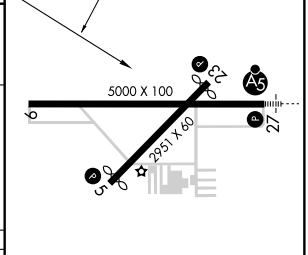
MISSED APPROACH: Climb to 1900, then climbing right turn to 3000 direct MBS VOR/DME and hold.

AWOS-3	SAGINAW APP CON ★	GCO	UNICOM
118.325	120.95 235.625	121.725	122.8 (CTAF) L

NoPT for arrivals on MBS VOR/DME airway radials 238 CW 016.







CATEGORY	A	B	C	D
CIRCLING	1160-1 560 (600-1)		1160-1½ 560 (600-1½)	NA
SAGINAW ALTIMETER SETTING MINIMUMS				
CIRCLING	1200-1 600 (600-1)		1200-1½ 600 (600-1½)	NA

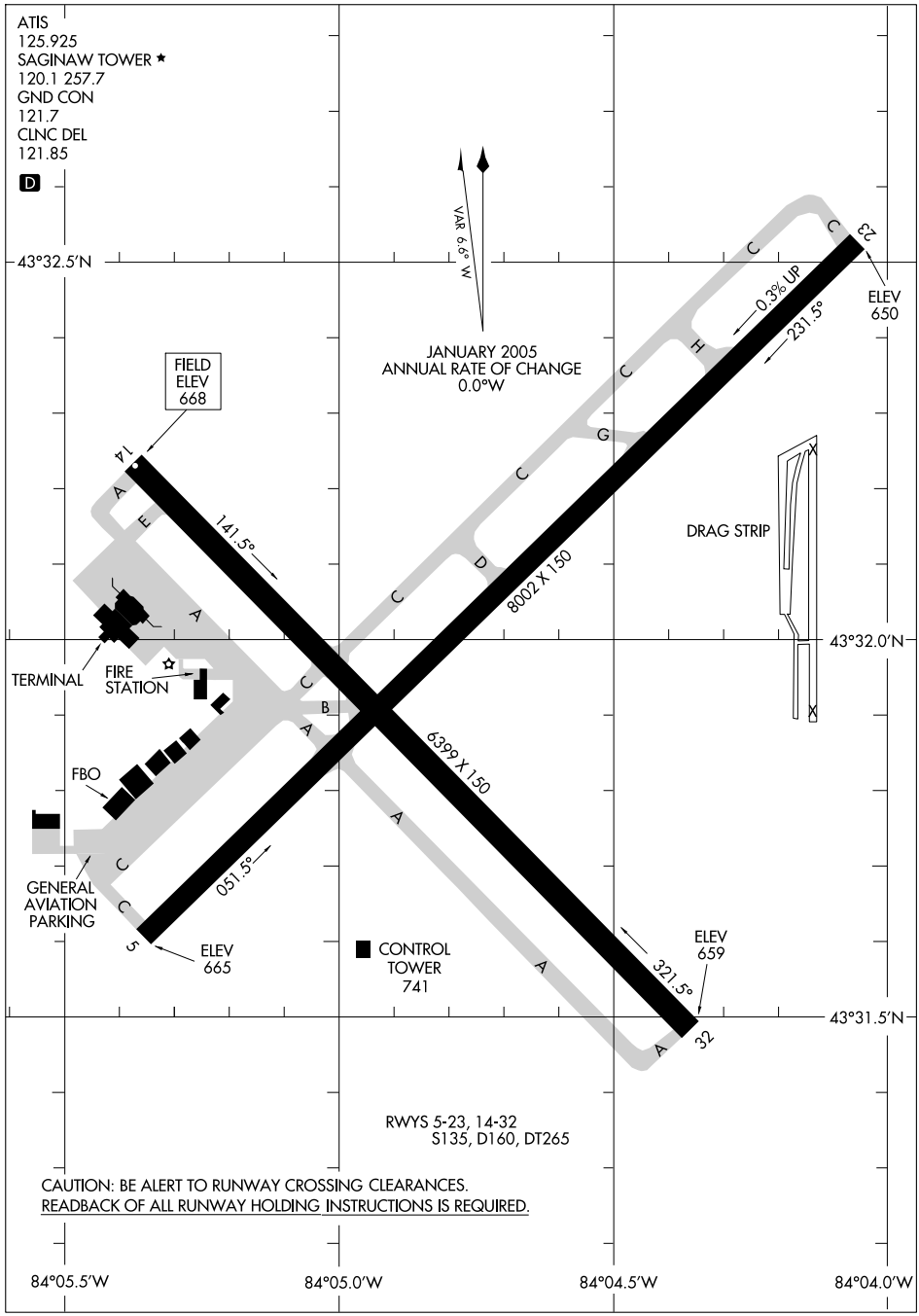
REIL Rwy 9 L
MIRL Rwys 5-23 and 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-648 (FAA)

SAGINAW / MBS INTL (MBS)
SAGINAW, MICHIGAN



EC-1, 14 JAN 2010 to 11 FEB 2010

LOC I-MBS	APP CRS	Rwy ldg	8002
108.7	050°	TDZE	666
		Apt Elev	668

ILS or LOC RWY 5

SAGINAW/MBS INTL (MBS)

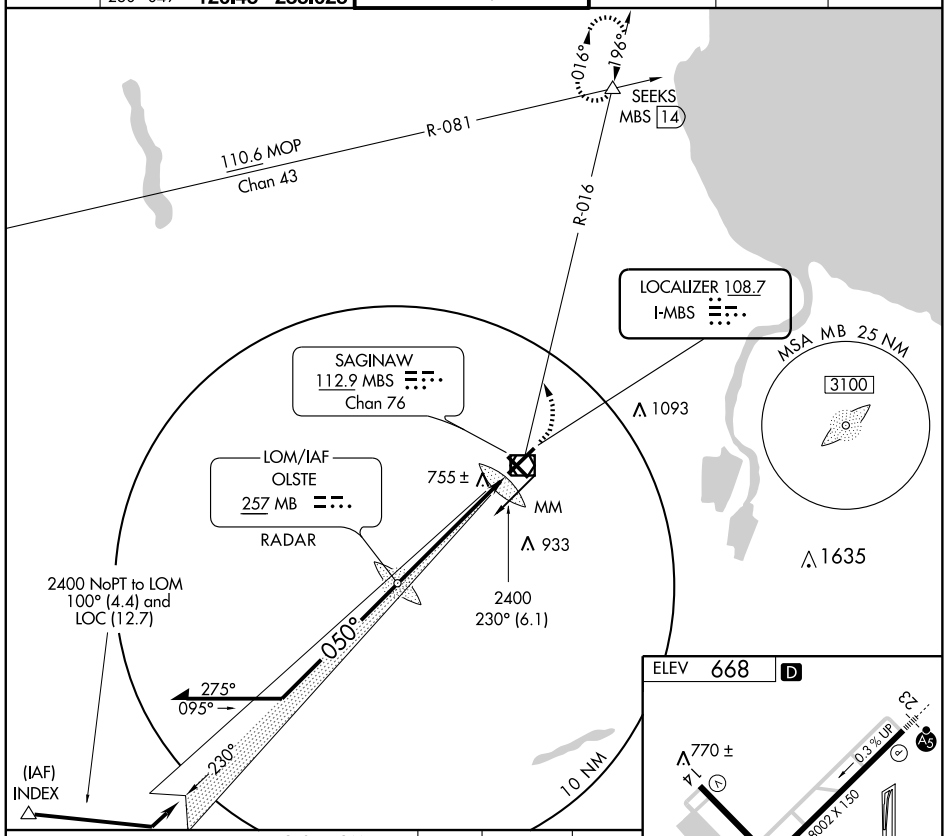
CAT D S-LOC visibility increased to RVR 5000 for inoperative MM. When control tower closed, activate MALSR Rwy 23 and SSALR Rwy 5 - CTAF.
*RVR 1800 authorized with the use of FD or AP or HUD to DA.

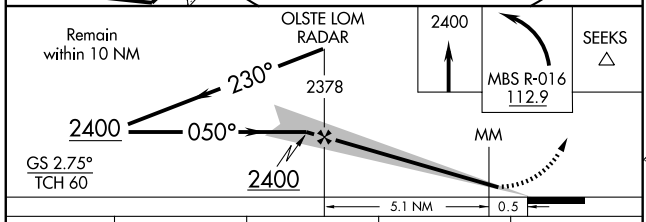
ASR

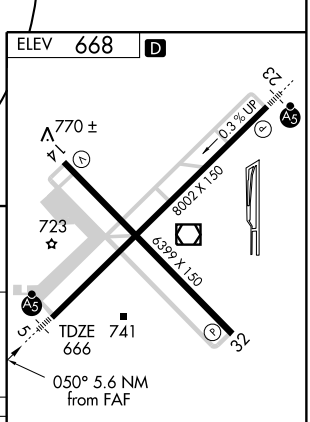
MALSR

MISSED APPROACH: Climb to 2400 then left turn via MBS R-016 to SEEKS Int/14 DME and hold.

ATIS	SAGINAW APP CON*		SAGINAW TOWER*	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95	235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95
	230°-049° 126.45	235.625				







CATEGORY	A	B	C	D
S-ILS 5	*866/24 200 (200-½)			
S-LOC 5	1060/24 394 (400-½)			1060/40 394 (400-¾)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-TQR	APP CRS	Rwy ldg	8002
108.7	230°	TDZE	661
		Apt Elev	668

ILS RWY 23

SAGINAW/MBS INTL (MBS)

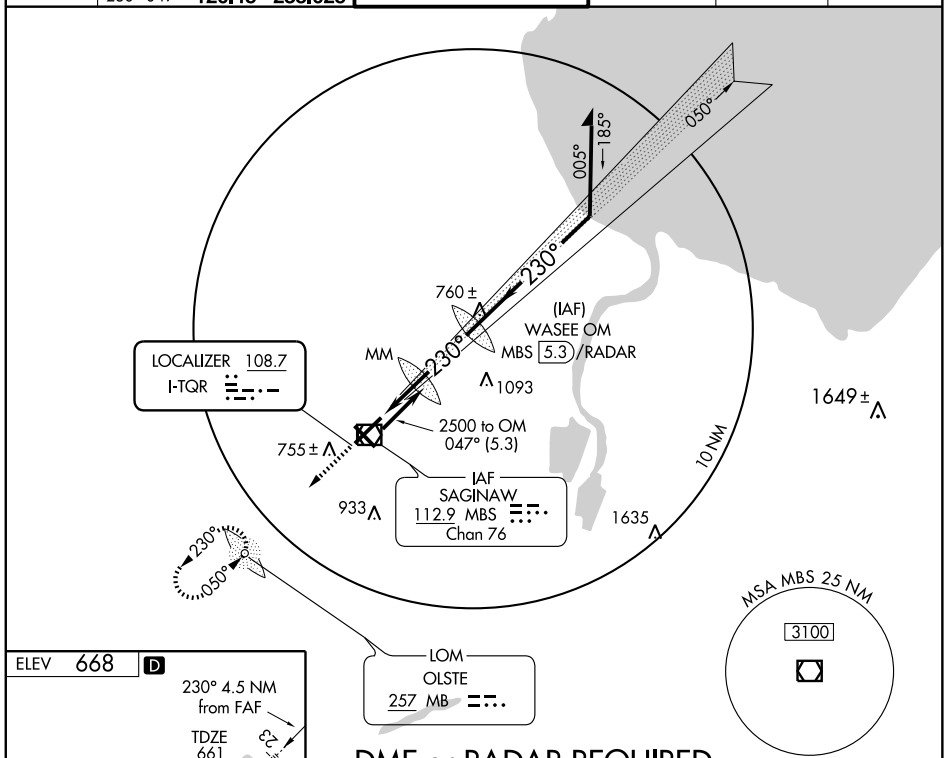
Cat. D S-LOC visibility increased ¼ mile for inoperative MM. When control tower closed, ACTIVATE MALSR Rwy 23 and SSALR Rwy 5-CTAF.

ASR

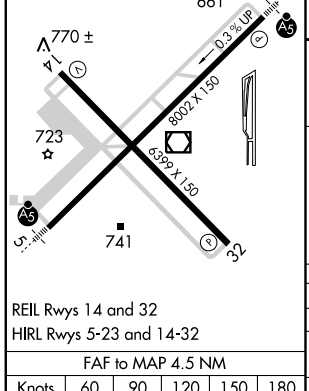
MALSR

MISSED APPROACH: Climb to 2500 direct OLSTE LOM and hold.

ATIS	SAGINAW APP CON ★		SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95	235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95
	230°-049° 126.45	235.625				



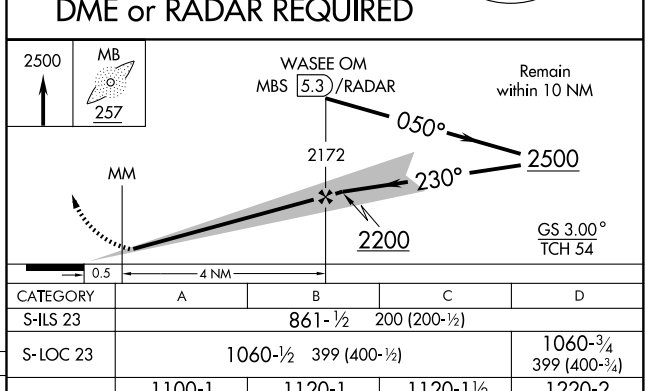
DME or RADAR REQUIRED



REIL Rwys 14 and 32

HIRL Rwys 5-23 and 14-32

FAF to MAP 4.5 NM					
Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30



CATEGORY	A	B	C	D
S-ILS 23	861-½ 200 (200-½)			
S-LOC 23	1060-½ 399 (400-½)			1060-¾ 399 (400-¾)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 82010 W05A	APP CRS 050°	Rwy ldg 8002 TDZE 666 Apt Elev 668

RNAV (GPS) RWY 5

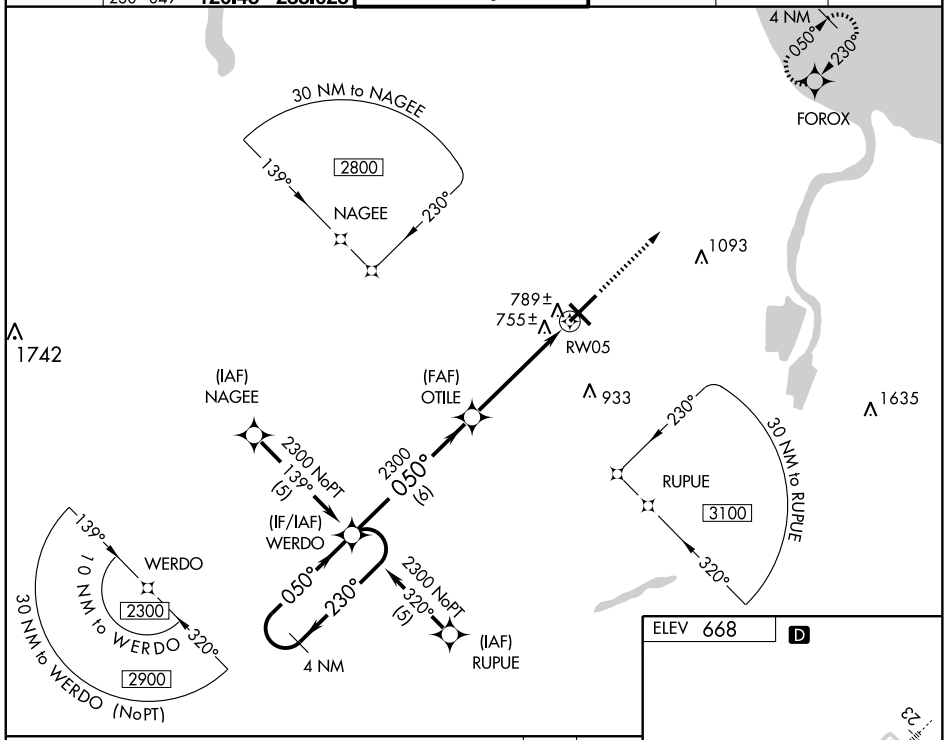
SAGINAW/ MBS INTL (MBS)

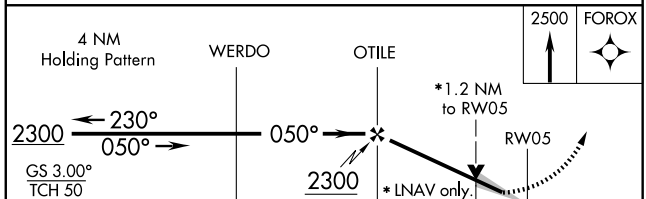
ASR: When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV/VNAV all Cats visibility to RVR 5000. For inoperative MALSR, increase LNAV Cat D visibility to RVR 6000. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP- 0.3 NA. Baro-VNAV and VDP NA when using Saginaw County H. W. Browne altimeter setting.

MALSR A5

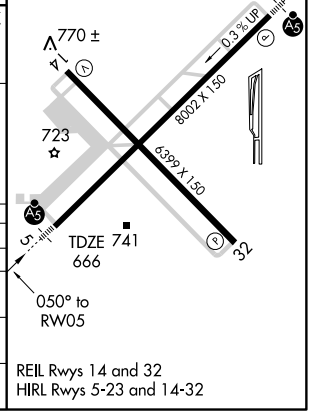
MISSED APPROACH: Climb to 2500 direct FOROX and hold.

ATIS	SAGINAW APP CON ★		SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 230°-049° 126.45	235.625 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95





CATEGORY	A	B	C	D
LPV DA	866/24 200 (200-½)			
LNAV/VNAV DA	1059/40 393 (400-¾)			
LNAV MDA	1080/24 414 (500-½)		1080/40 414 (500-¾)	1080/50 414 (500-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)



WAAS CH 69211 W14A	APP CRS 140°	Rwy ldg 6399 TDZE 668 Apt Elev 668

RNAV (GPS) RWY 14

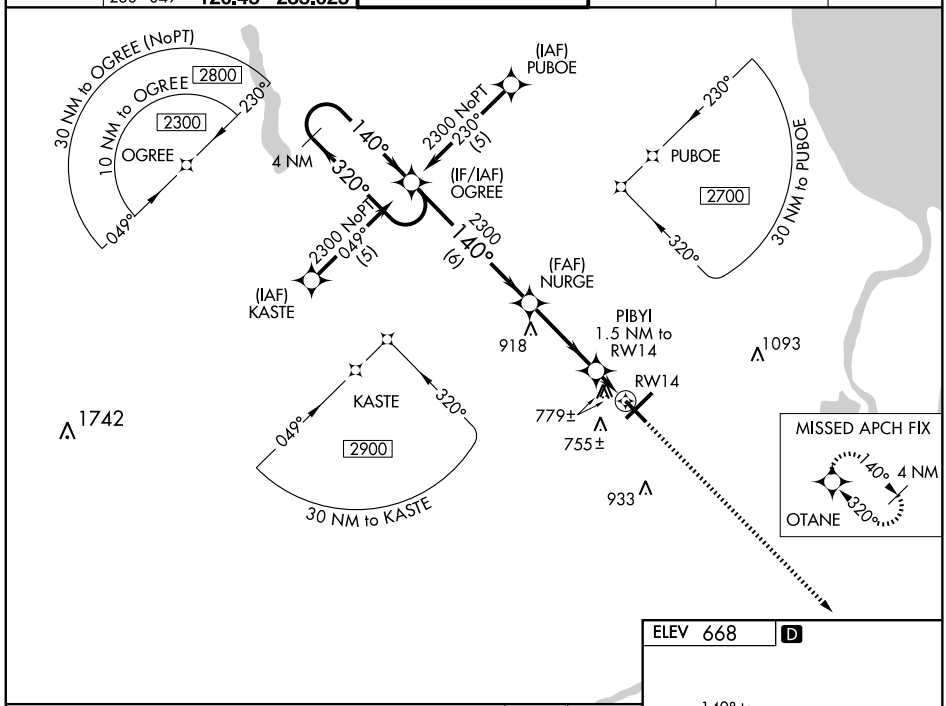
SAGINAW/ MBS INTL (MBS)

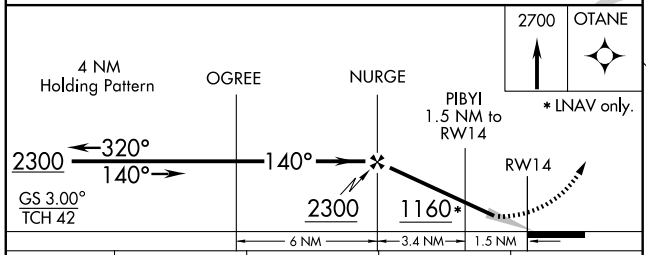
ASR

Baro-VNAV NA when using Saginaw County H. W. Browne alimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV Cat. C visibility ¼ mile. DME/DME RNP -0.3 NA.

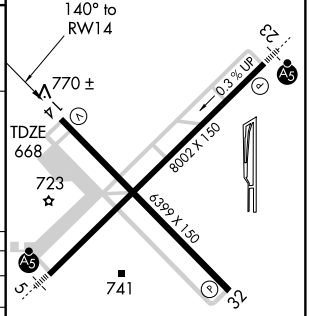
MISSED APPROACH: Climb to 2700 direct OTANE and hold.

ATIS	SAGINAW APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 235.625 230°-049° 126.45 235.625	120.1 (CTAF) (L) 257.7	121.7	121.85	122.95





CATEGORY	A	B	C	D
LPV DA	1004-1¼ 336 (400-1¼)			
LNAV/ VNAV DA	1079-1½ 411 (500-1½)			
LNAV MDA	1040-1 372 (400-1)			1040-1¼ 372 (400-1¼)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)



REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

WAAS CH 49010 W23A	APP CRS 230°	Rwy ldg 8002 TDZE 661 Apt Elev 668

RNAV (GPS) RWY 23

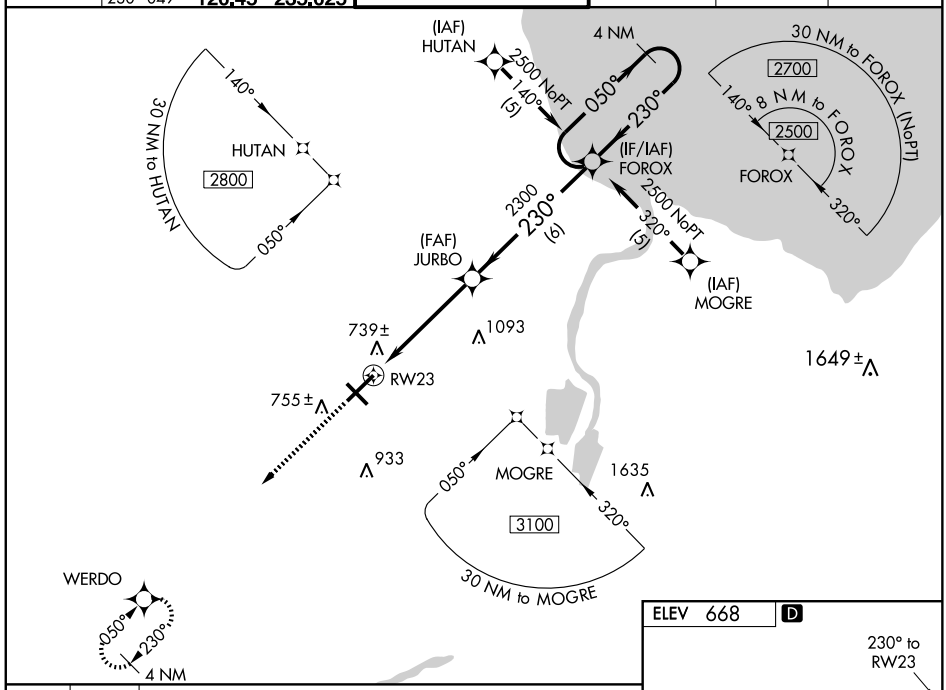
SAGINAW/ MBS INTL (MBS)

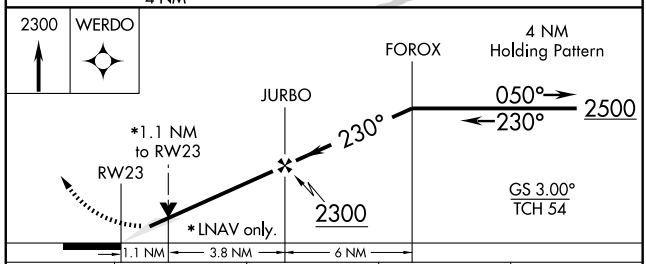
ASR When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LNAV/VNAV all Cats visibility ¼ mile, LNAV Cat C visibility ¼ mile. Baro-VNAV and VDP NA when using Saginaw County H. W. Browne altimeter setting. For inoperative MALSR, increase LNAV Cat D visibility to 1¼. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP- 0.3 NA.

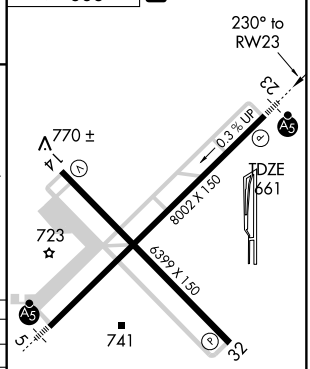
MALSR

MISSED APPROACH: Climb to 2300 direct WERDO and hold.

ATIS	SAGINAW APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 235.625 230°-049° 126.45 235.625	120.1 (CTAF) (L) 257.7	121.7	121.85	122.95







REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

CATEGORY	A	B	C	D
LPV DA	861-½ 200 (200-½)			
LNAV/VNAV DA	1034-¾ 373 (400-¾)			
LNAV MDA	1060-½ 399 (400-½)			1060-1 399 (400-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 78011 W32A	APP CRS 320°	Rwy ldg 6399 TDZE 665 Apt Elev 668

RNAV (GPS) RWY 32

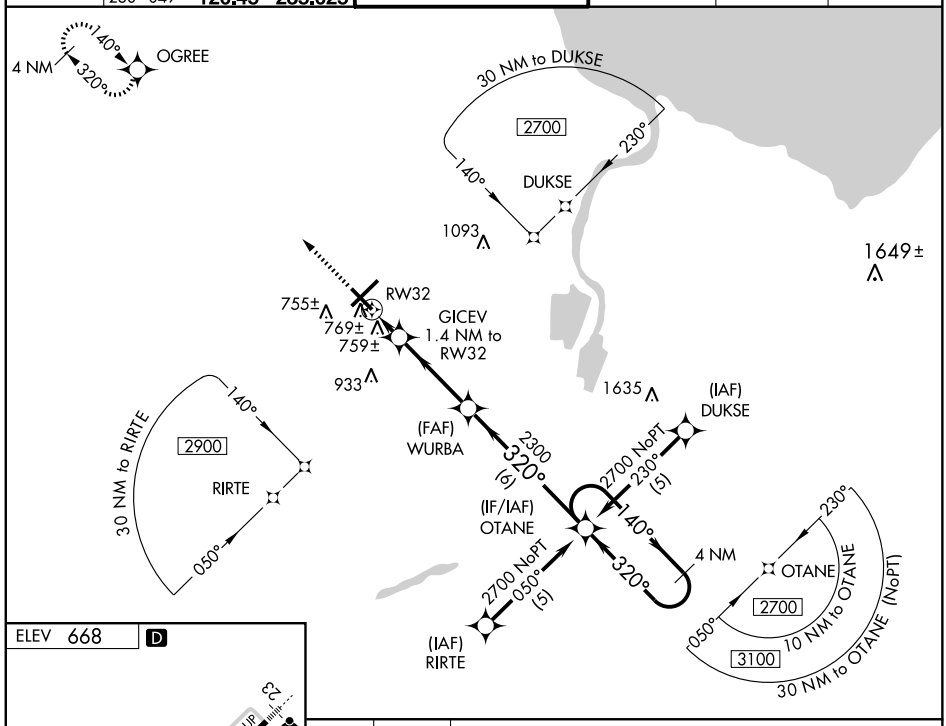
SAGINAW/ MBS INTL (MBS)

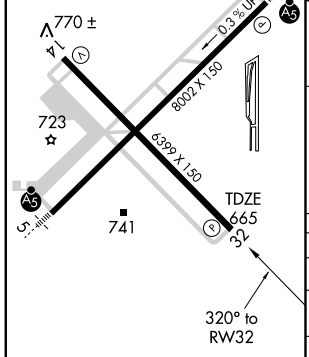
Baro-Vnav NA when using Saginaw County H. W. Browne altimeter setting. For uncompensated Baro-Vnav systems, LNAV/VNAV NA below -16°C (4°F) or above 47° (116°F). When local altimeter setting not received, use Saginaw County H. W. Browne altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV all Cats. visibility and LNAV Cat. C visibility ¼ mile. DME/DME RNP- 0.3 NA.

ASR

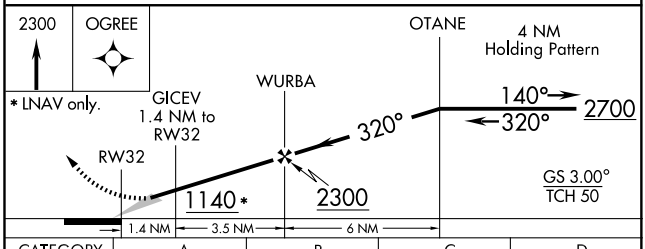
MISSED APPROACH: Climb to 2300 direct OGREE and hold.

ATIS	SAGINAW APP CON ★		SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95	235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95
	230°-049° 126.45	235.625				





REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32



CATEGORY	A	B	C	D
LPV DA	964-1 299 (300-1)			
LNAV/VNAV DA	1057-1½ 392 (400-1½)			
LNAV MDA	1040-1 375 (400-1)			1040-1¼ 375 (400-1¼)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 057°	Rwy ldg 8002 TDZE 666 Apt Elev 668

VOR RWY 5

SAGINAW/MBS INTL (MBS)

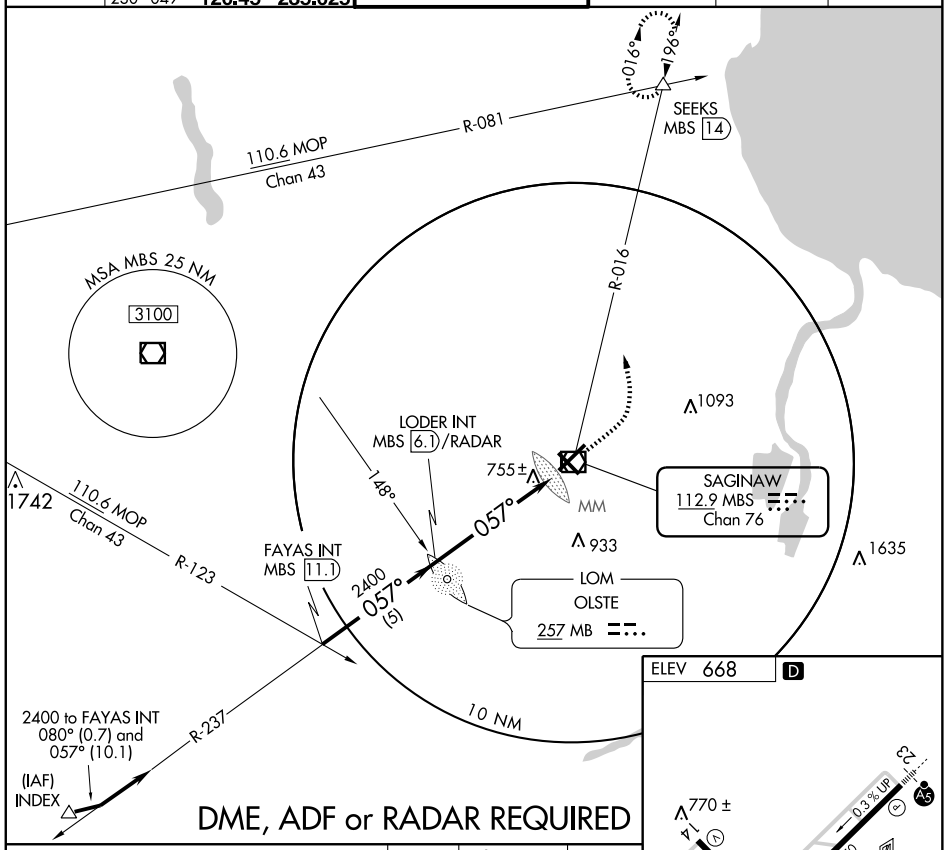
ASR

Category D S-5 visibility increased to RVR 6000 for inoperative SSALR.

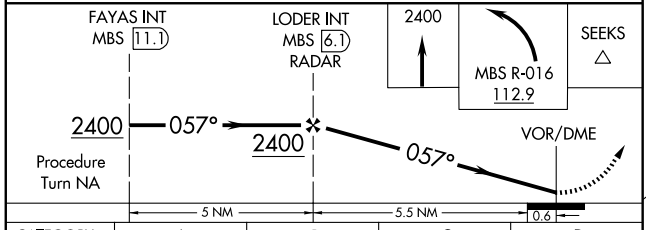
MALSR

MISSED APPROACH: Climb to 2400 then left turn via MBS R-016 to Seeks Int/14 DME and hold.

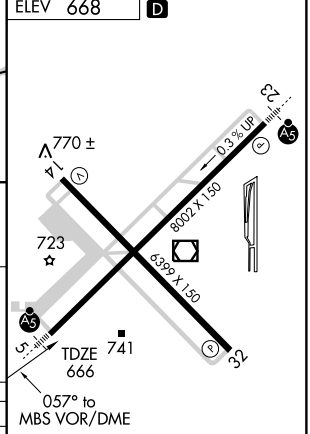
ATIS	SAGINAW APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 235.625 230°-049° 126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95



DME, ADF or RADAR REQUIRED



CATEGORY	A	B	C	D
S-5	1060/24 394 (400-½)			1060/50 394 (400-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)



REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 131°	Rwy ldg 6399 TDZE 668 Apt Elev 668

VOR RWY 14

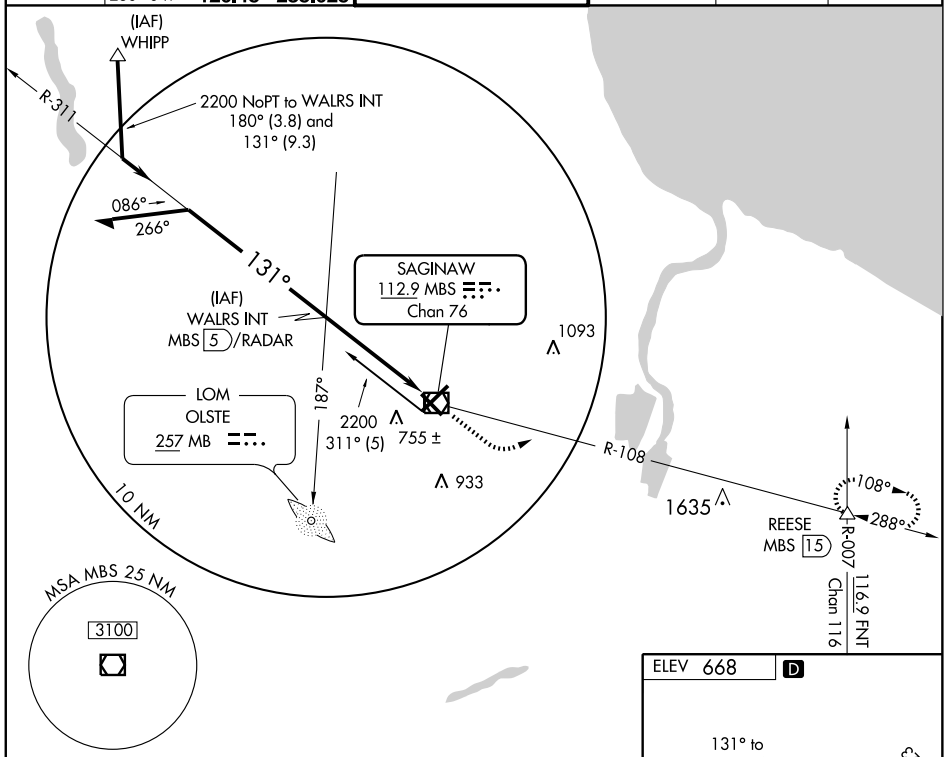
SAGINAW/MBS INTL (MBS)

ASR

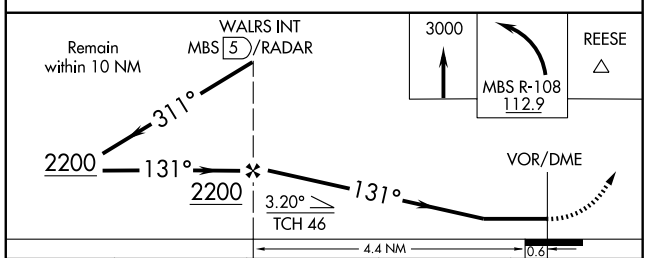
Air carrier landing visibility reduction below ¾ mile for local conditions NA.

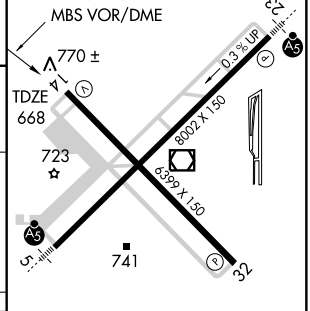
MISSED APPROACH: Climb to 3000 then left turn via MBS R-108 to REESE Int/15 DME and hold.

ATIS	SAGINAW APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 235.625 230°-049° 126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95



DME, ADF or RADAR REQUIRED





CATEGORY	A	B	C	D
S-14	1040-1 372 (400-1)			1040-1¼ 372 (400-1¼)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 217°	Rwy ldg 8002 TDZE 661 Apt Elev 668

VOR RWY 23

SAGINAW/MBS INTL (MBS)

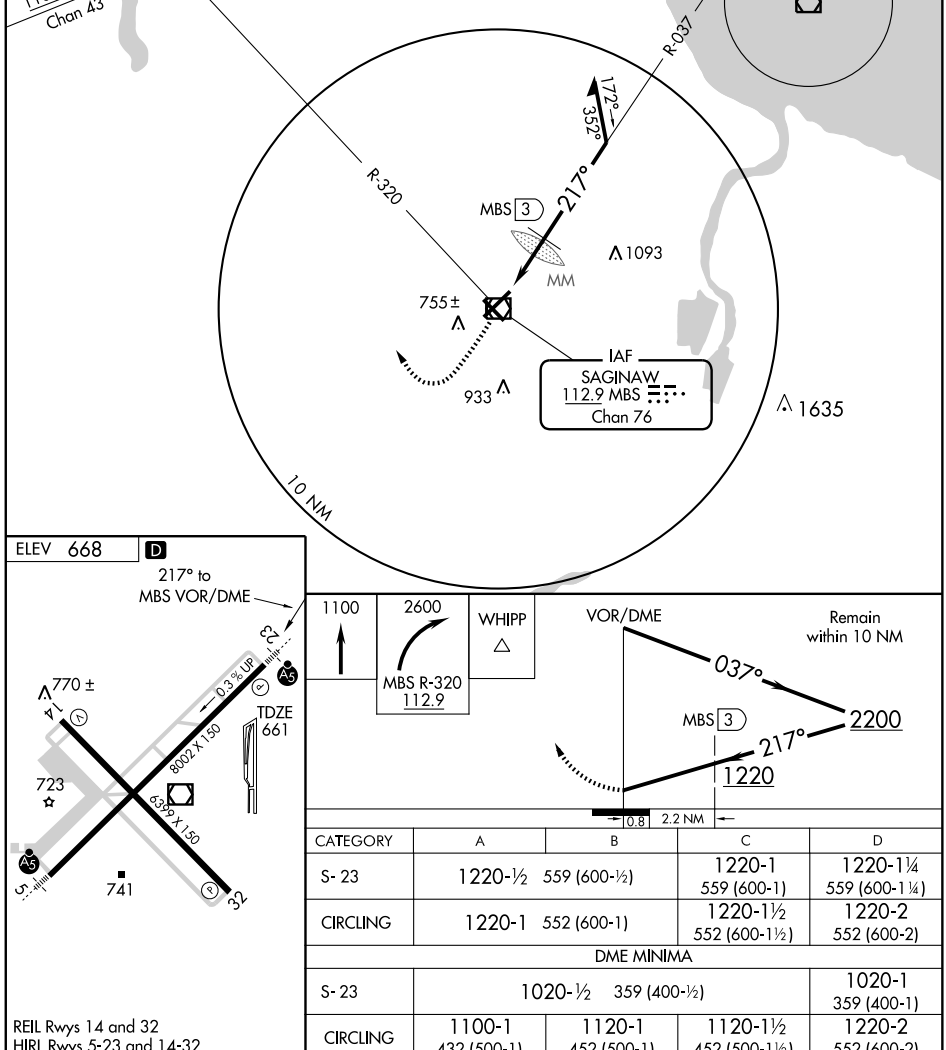
ASR

Cat. D S-23 DME minimums visibility increased ¼ mile for inoperative MALSR.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 2600 via MBS R-320 to WHIPP Int/17 DME and hold.

ATIS	SAGINAW APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95 235.625 230°-049° 126.45 235.625	120.1(CTAF) L 257.7	121.7	121.85	122.95



CATEGORY	A	B	C	D
S- 23	1220-½ 559 (600-½)		1220-1 559 (600-1)	1220-1¼ 559 (600-1¼)
CIRCLING	1220-1 552 (600-1)		1220-1½ 552 (600-1½)	1220-2 552 (600-2)
DME MINIMA				
S- 23	1020-½ 359 (400-½)			1020-1 359 (400-1)
CIRCLING	1100-1 432 (500-1)	1120-1 452 (500-1)	1120-1½ 452 (500-1½)	1220-2 552 (600-2)

REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME MBS 112.9 Chan 76	APP CRS 329°	Rwy ldg 6399 TDZE 666 Apt Elev 668

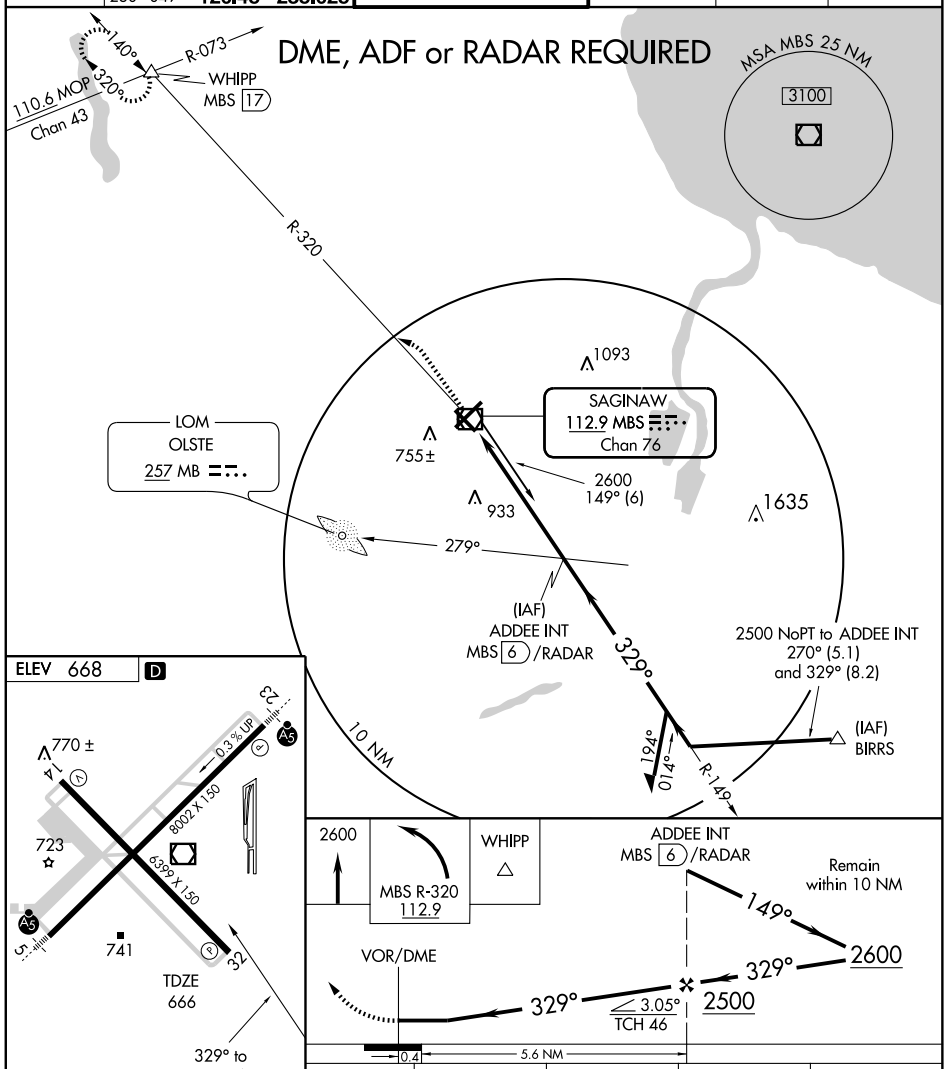
VOR RWY 32

SAGINAW/ MBS INTL (MBS)

ASR

MISSED APPROACH: Climb to 2600 then left turn via MBS R-320 to WHIPP Int/17 DME and hold.

ATIS	SAGINAW APP CON ★		SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	050°-229° 120.95	235.625	120.1 (CTAF) (L) 257.7	121.7	121.85	122.95
	230°-049° 126.45	235.625				



CATEGORY	A	B	C	D
S-32	1200-1 534 (600-1)		1200-1½ 534 (600-1½)	1200-1¾ 534 (600-1¾)
CIRCLING	1200-1 532 (600-1)		1200-1½ 532 (600-1½)	1220-2 552 (600-2)

REIL Rwys 14 and 32
HIRL Rwys 5-23 and 14-32

EC-1. 14 JAN 2010 to 11 FEB 2010

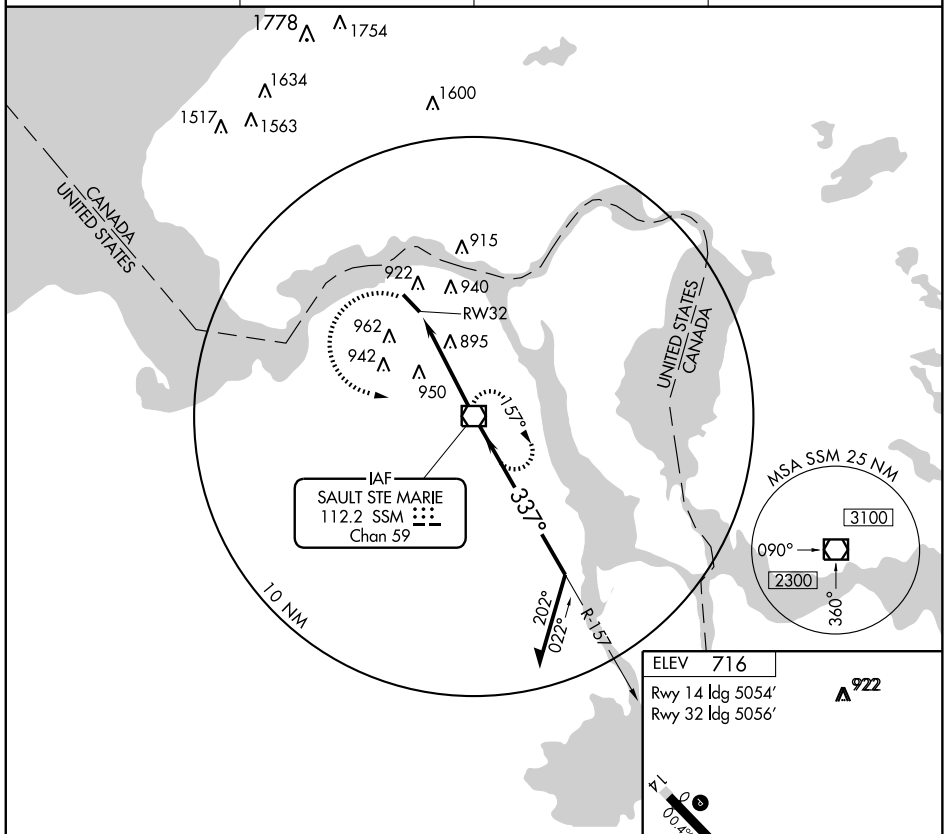
VOR/DME SSM 112.2 Chan 59	APP CRS 337°	Rwy ldg 4801 TDZE 716 Apt Elev 716

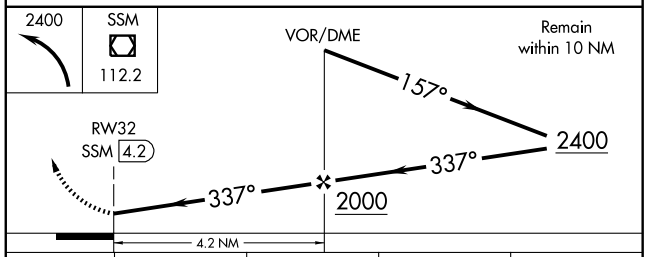
VOR or GPS RWY 32

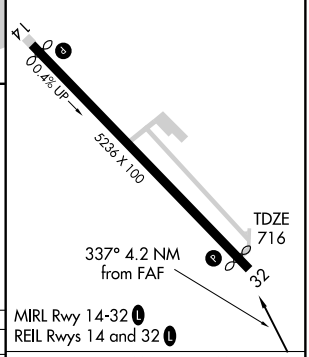
SAULT STE MARIE/ SANDERSON FIELD (ANJ)

MISSED APPROACH: Climbing left turn to 2400 direct SSM VOR/DME and hold.

ASOS	TORONTO CENTER	GCO	UNICOM
118.375	132.65 344.5	135.075	122.7 (CTAF) L







CATEGORY	A	B	C	D
S-32	1200-1 484 (500-1)		NA	
CIRCLING	1280-1 564 (600-1)	1300-1 584 (600-1)	NA	

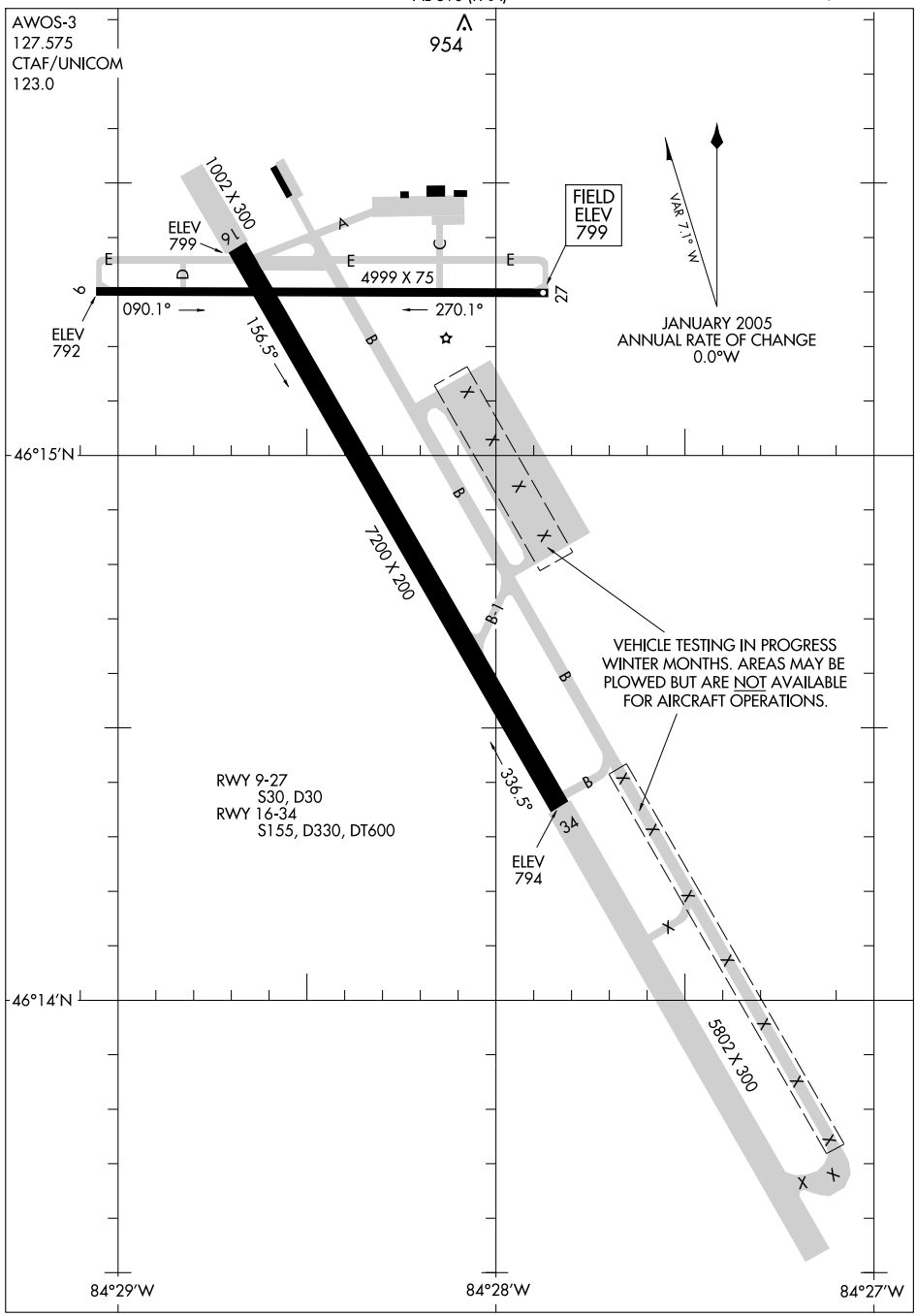
FAF to MAP 4.2 NM

Knots	60	90	120	150	180
Min:Sec	4:12	2:48	2:06	1:41	1:24

AIRPORT DIAGRAM

AL-810 (FAA)

SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)
SAULT STE MARIE, MICHIGAN



LOC I-CIU	APP CRS	Rwy ldg	7200
110.3	156°	TDZE	799
		Apt Elev	800

ILS RWY 16

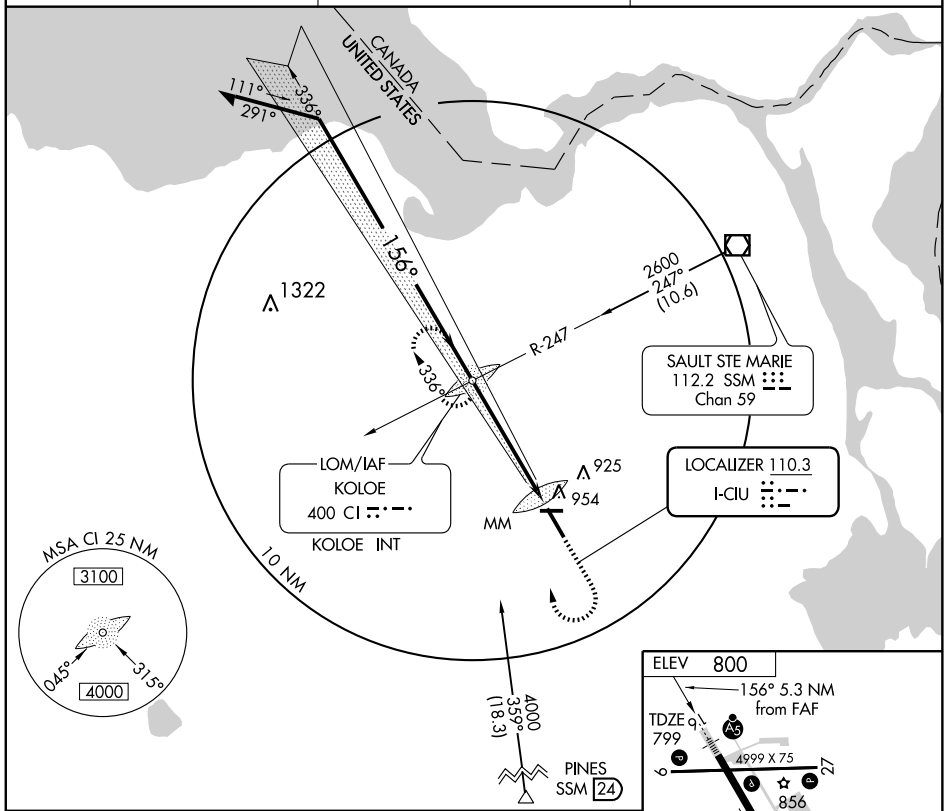
SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

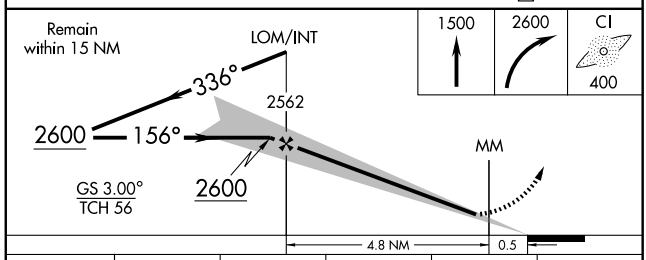
NA — ILS unusable from MM inbound.

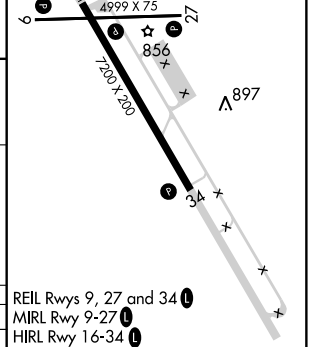
MALSR

MISSED APPROACH: Climb to 1500 then climbing right turn to 2600 direct CI LOM/Int and hold. (TACAN aircraft climb to 5000 via 160° heading and SSM R-201 to PINES Int/24 DME and hold South, right turns, 021° inbound).

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D	E
S-ILS 16	1049-½ 250 (300-½)			1049-¾ 250 (300-¾)	
S-LOC 16	1160-½ 361 (400-½)			1160-¾ 361 (400-¾)	
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)	1380-2 580 (600-2)

FAF to MAP 4.8 NM

Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM CI	APP CRS	Rwy ldg	7200
400	336°	TDZE	796
		Apt Elev	800

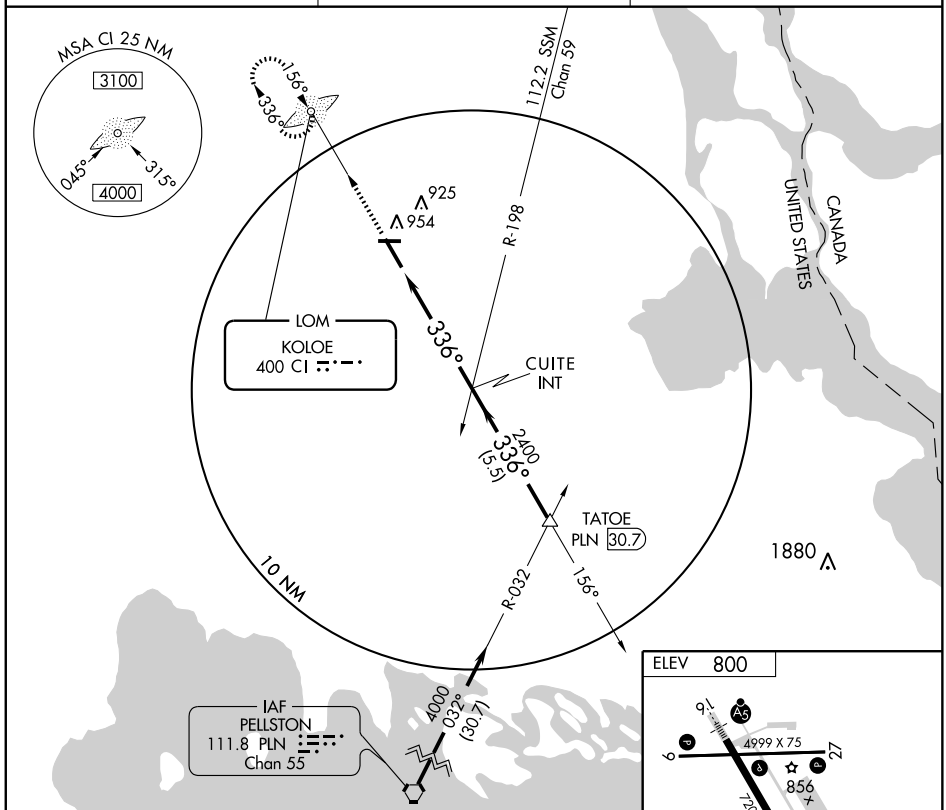
NDB RWY 34

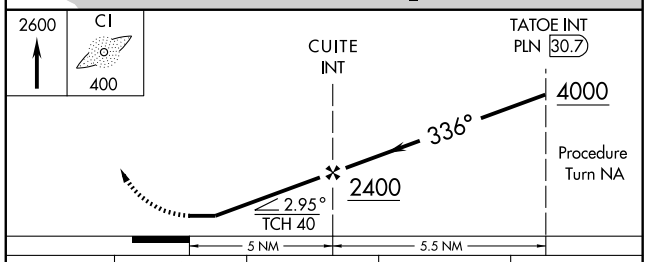
SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)

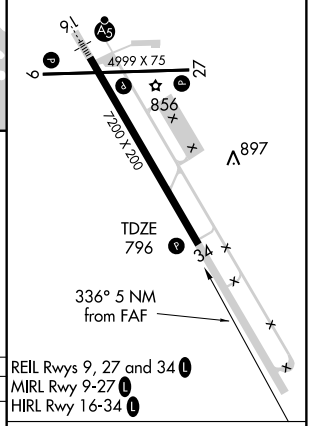
NA

MISSED APPROACH: Climb to 2600 direct CI LOM and hold.

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D
S-34	1220-1 424 (500-1)		1220-1¼ 424 (500-1¼)	
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

APP CRS	Rwy ldg	4999
096°	TDZE	795
	Apt Elev	800

RNAV (GPS) RWY 9

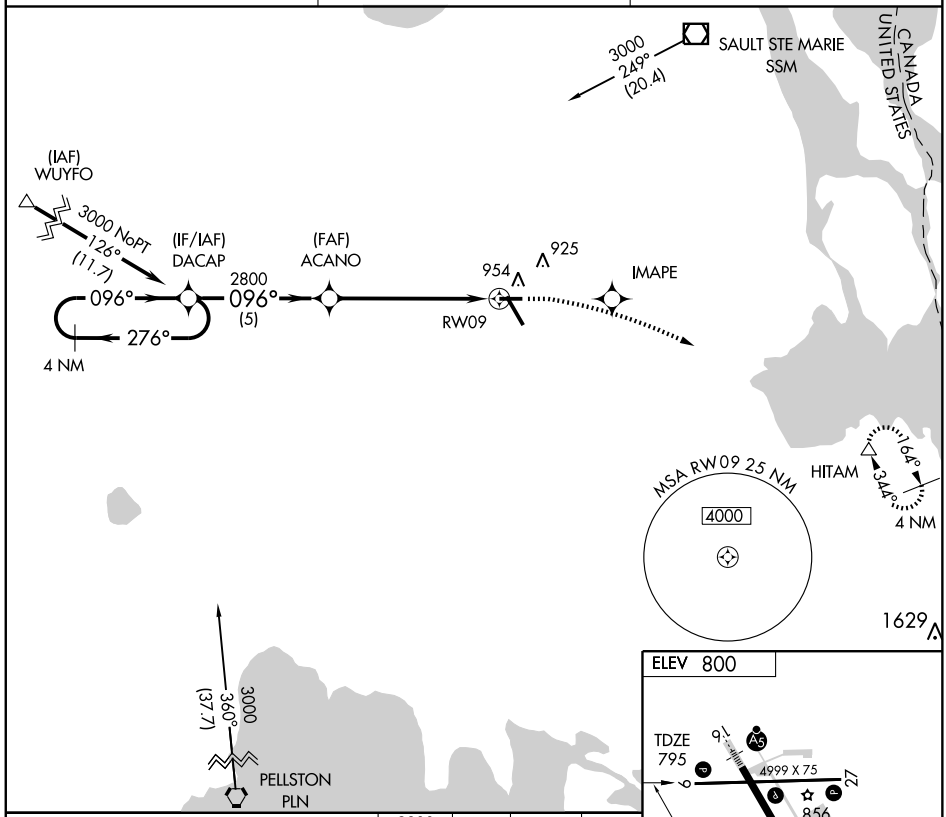
SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

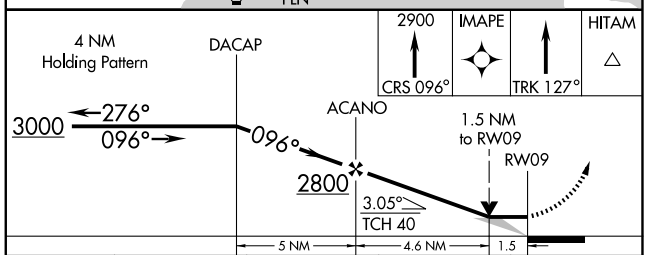
NA

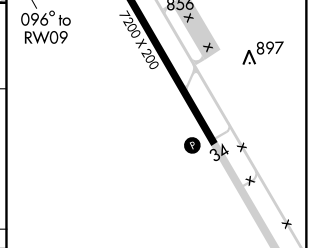
Straight-in minimums NA at night.
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2900 via 096° course to IMAPE WP and via 127° track to HITAM WP and hold.

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D
LNAV MDA	1320 - 1	525 (600-1)	1320 - 1½ 525 (600-1½)	1320 - 1¾ 525 (600-1¾)
CIRCLING	1320 - 1	520 (600-1)	1320 - 1½ 520 (600-1½)	1360 - 2 560 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 69215 W16A	APP CRS 156°	Rwy ldg 7200 TDZE 799 Apt Elev 800

RNAV (GPS) RWY 16

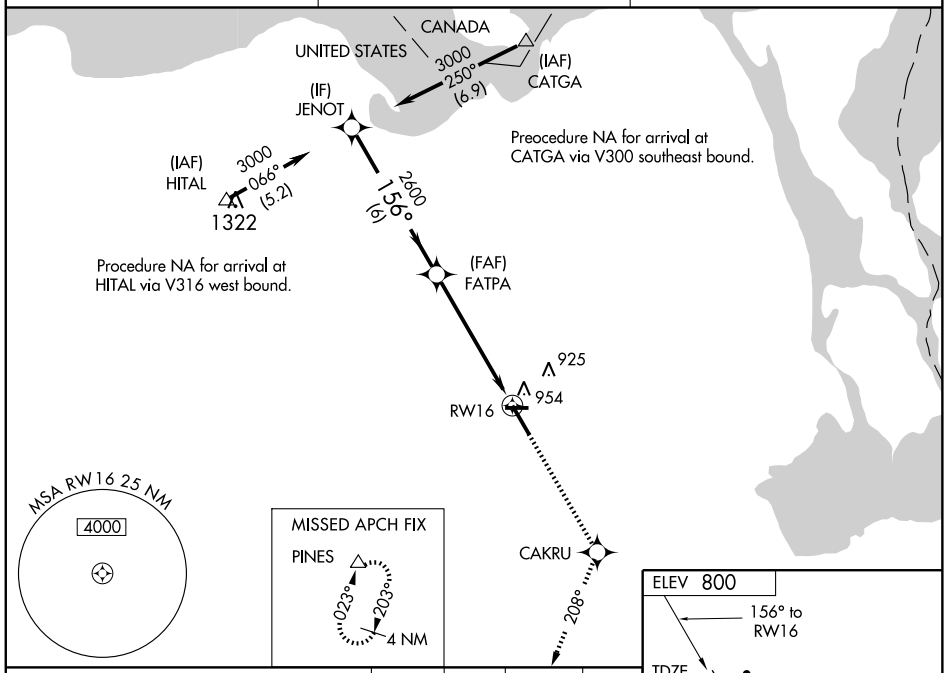
SAULT STE MARIE/CHIPPEWA COUNTY INTL (CIU)

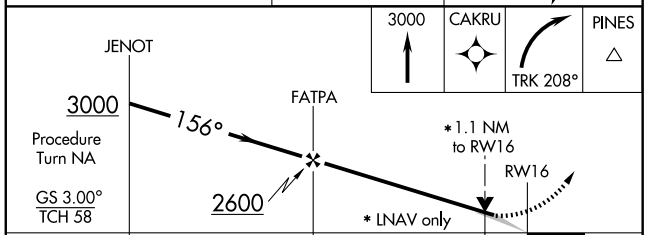
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting and increase all DA 45 feet and all MDA 60 feet. Baro-VNAV and VDP NA when using Sault Ste Marie Muni/Sanderson Field altimeter setting. For inoperative MALSR, increase LPV all Cats, LNAV/VNAV all Cats and LNAV Cats A/B/C ½ mile, increase LNAV Cat D ¼ mile. For inoperative MALSR, when using Sault Ste Marie Muni/Sanderson Field altimeter setting, increase LPV all Cats, LNAV/VNAV all Cats and LNAV all Cats ½ mile.

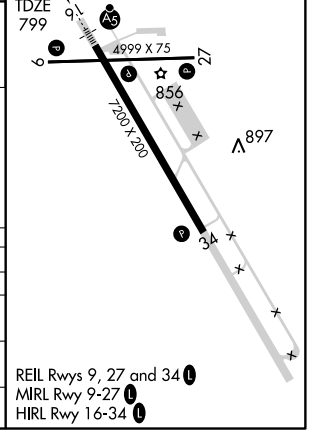
MALSR A5

MISSED APPROACH: Climb to 3000 direct CAKRU and right turn via track 208° to PINES and hold.

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D
LPV DA	1068-½ 269 (300-½)			
LNAV/VNAV DA	1204-1 405 (500-1)			
LNAV MDA	1220-½ 421 (500-½)		1220-¾ 421 (500-¾)	1220-1 421 (500-1)
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4999
276°	TDZE	800
	Apt Elev	800

RNAV (GPS) RWY 27

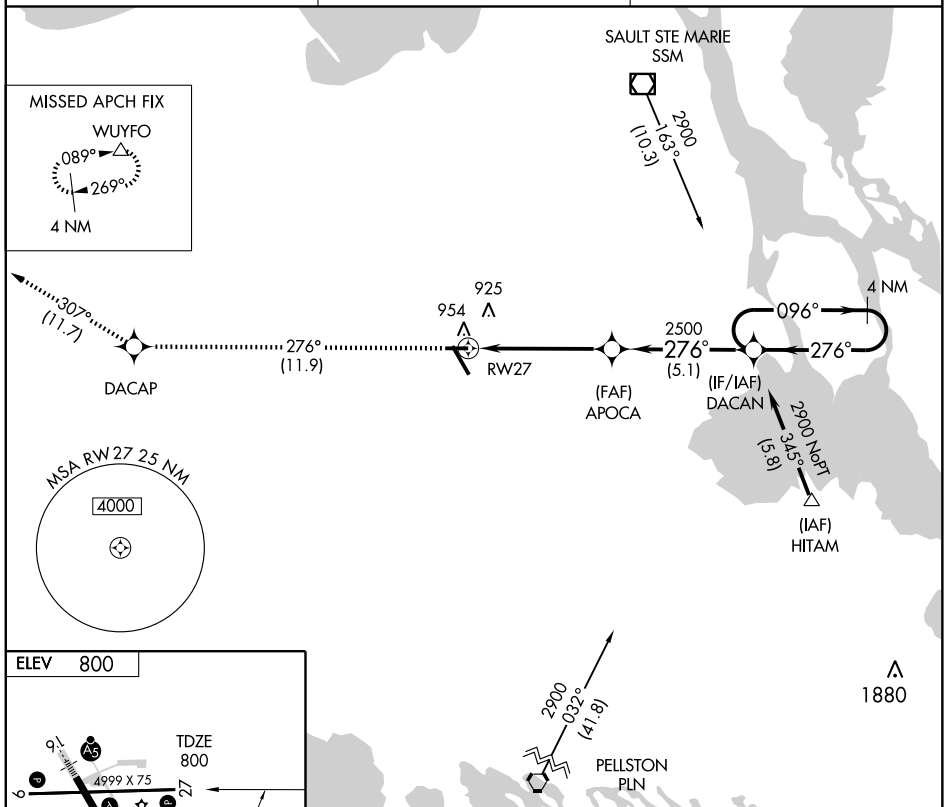
SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

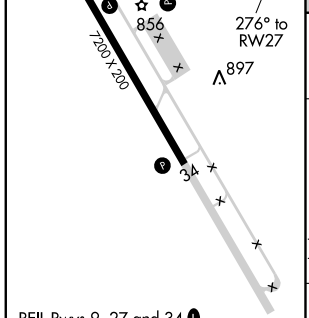
NA

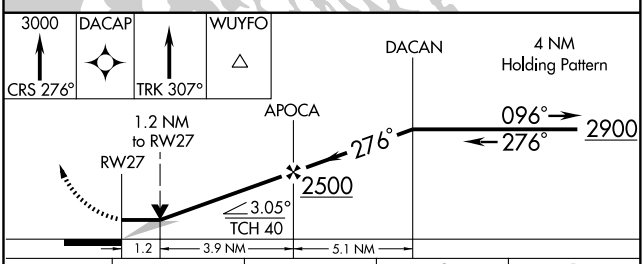
Straight-in minimums NA at night.
GPS or RNP-0.3 required.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 via 276° course to DACAP WP and via 307° track to WUYFO WP and hold.

AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D
LNAV MDA	1220 - 1 420 (500-1)		1220 - 1¼ 420 (500-1¼)	
CIRCLING	1260 - 1 460 (500-1)		1260 - 1½ 460 (500-1½)	1360 - 2 560 (600-2)

WAAS CH 56315 W34A	APP CRS 336°	Rwy ldg 7200 TDZE 796 Apt Elev 800

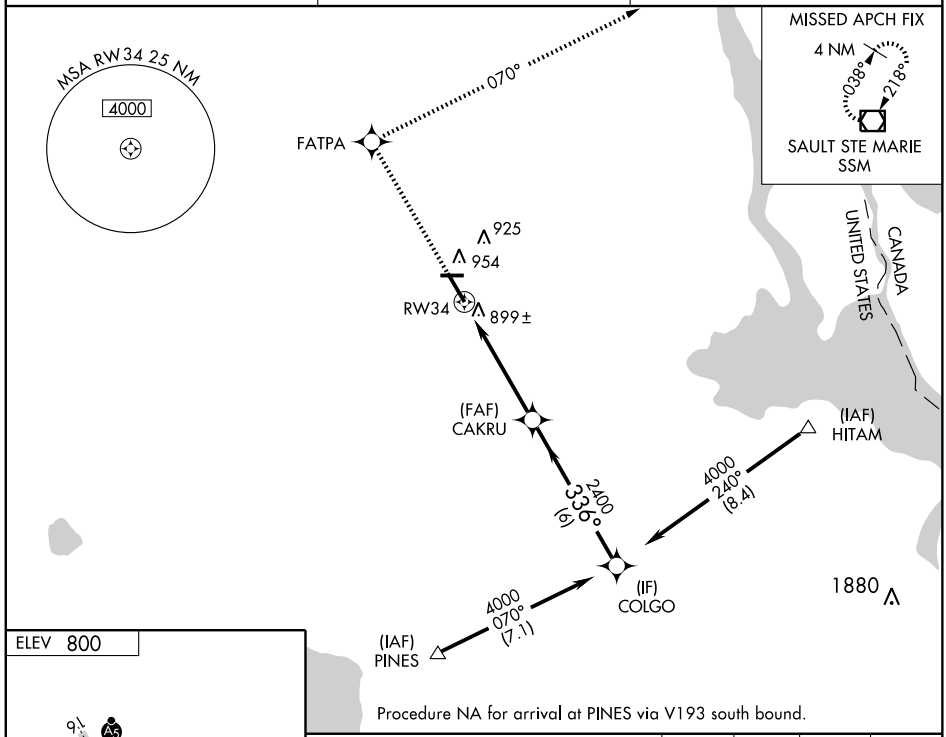
RNAV (GPS) RWY 34

SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

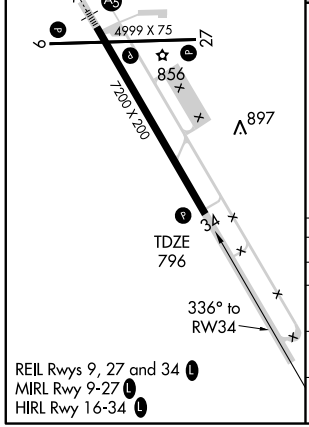
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting and increase all DA 45 feet and all MDA 60 feet; increase LNAV Cat D visibility ¼ mile. Baro-VNAV and VDP NA when using Sault Ste Marie Muni/Sanderson Field altimeter setting.

MISSED APPROACH: Climb to 3000 direct FATPA and right turn via track 070° to SSM VOR/DME and hold.

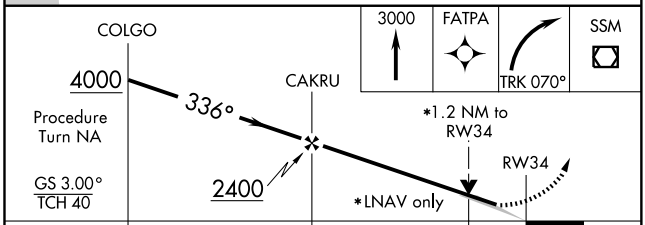
AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L



Procedure NA for arrival at PINES via V193 south bound.



REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L



CATEGORY	A	B	C	D
LPV DA	1046-1 250 (300-1)			
LNAV/VNAV DA	1198-1½ 402 (400-1½)			
LNAV MDA	1200-1 404 (400-1)		1200-1¼ 404 (400-1¼)	
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)

VOR/DME SSM	APP CRS	Rwy Idg	N/A
112.2	218°	TDZE	N/A
Chan 59		Apt Elev	800

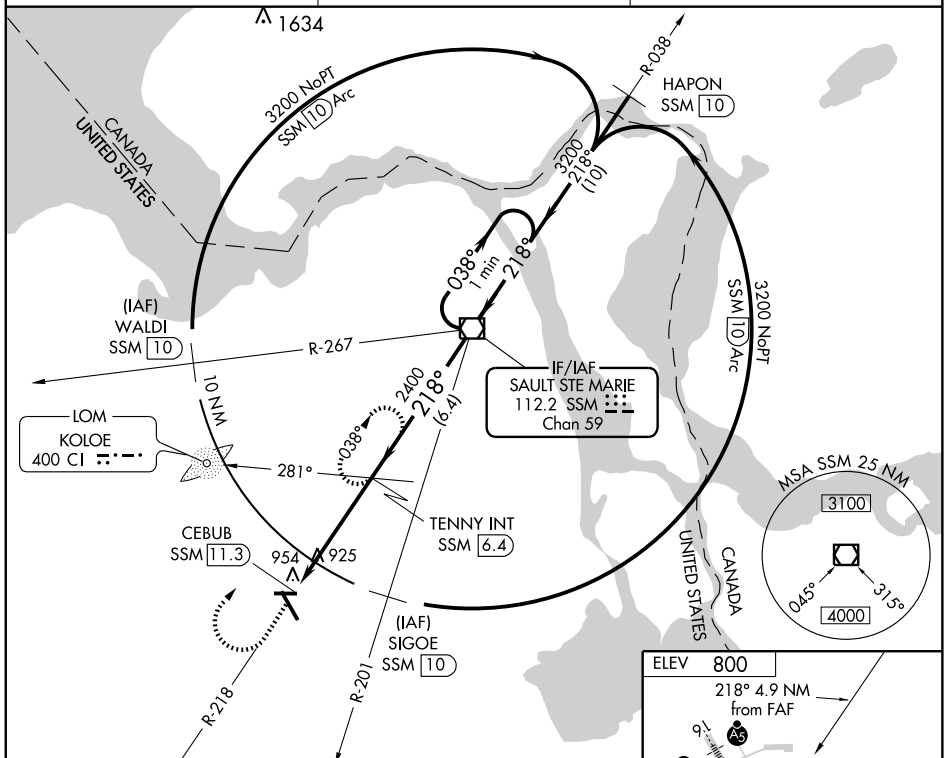
VOR-A

SAULT STE MARIE/ CHIPPEWA COUNTY INTL (CIU)

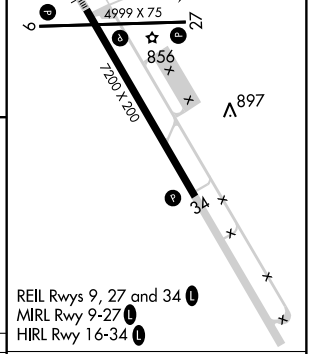
DME or ADF REQUIRED. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climb to 1500 then climbing right turn to 2400 via SSM R-218 to TENNY Int/6.4 DME and hold.

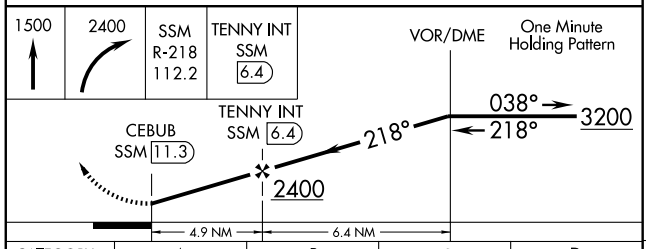
AWOS-3	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L



NoPT for arrivals on SSM VOR/DME airway Radials 320 CW 115



REIL Rwys 9, 27 and 34 L
MIRL Rwy 9-27 L
HIRL Rwy 16-34 L



CATEGORY	A	B	C	D
CIRCLING	1260-1 460 (500-1)		1260-1½ 460 (500-1½)	1360-2 560 (600-2)

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

EC-1. 14 JAN 2010 to 11 FEB 2010

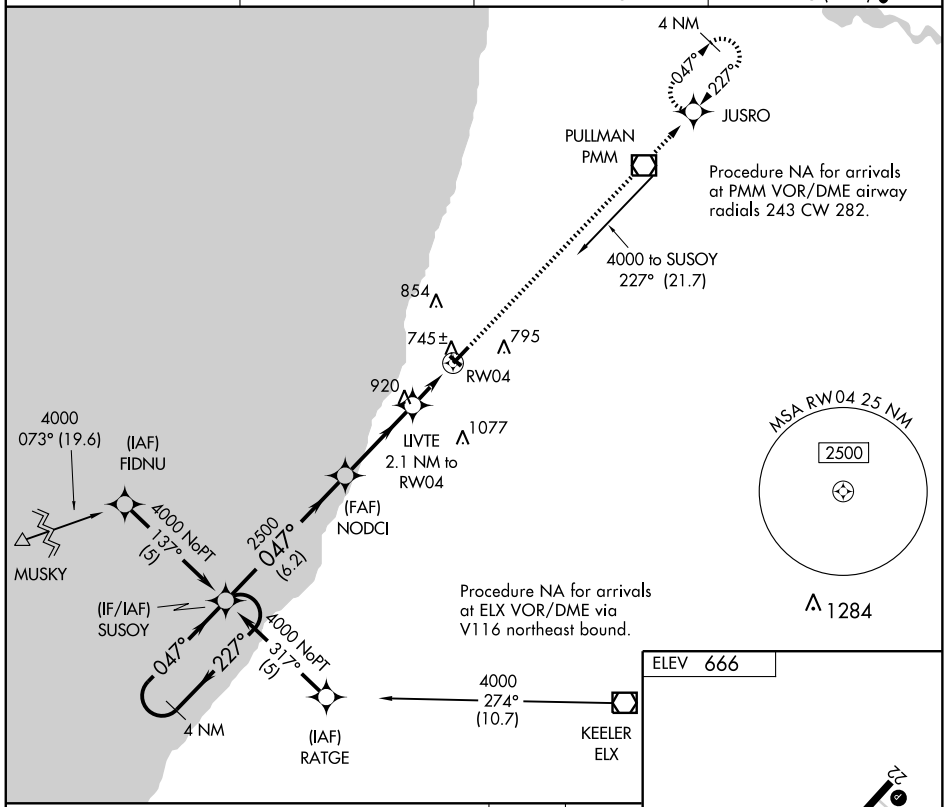
APP CRS	Rwy ldg	4801
047°	TDZE	659
	Apt Elev	666

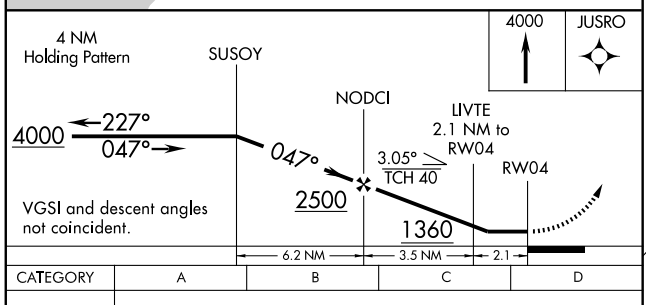
RNAV (GPS) RWY 4
SOUTH HAVEN AREA RGNL (LWA)

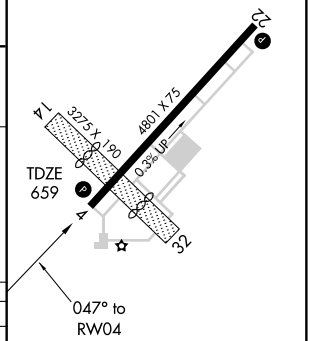
When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase LNAV visibility Cat C ¼ mile, Cat D ½ mile and Circling visibility Cat D ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA

MISSED APPROACH: Climb to 4000 direct JUSRO and hold. Continue climb-in-hold to 4000.

AWOS-3	SOUTH BEND APP CON ★	GCO	UNICOM
118.025	118.55 257.8	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1000-1 341 (400-1)			
CIRCLING	1120-1 454 (500-1)		1120-1½ 454 (500-1½)	1280-2 614 (700-2)

REIL Rwys 4 and 22 L
MIRL Rwy 4-22 L

EC-1. 14 JAN 2010 to 11 FEB 2010

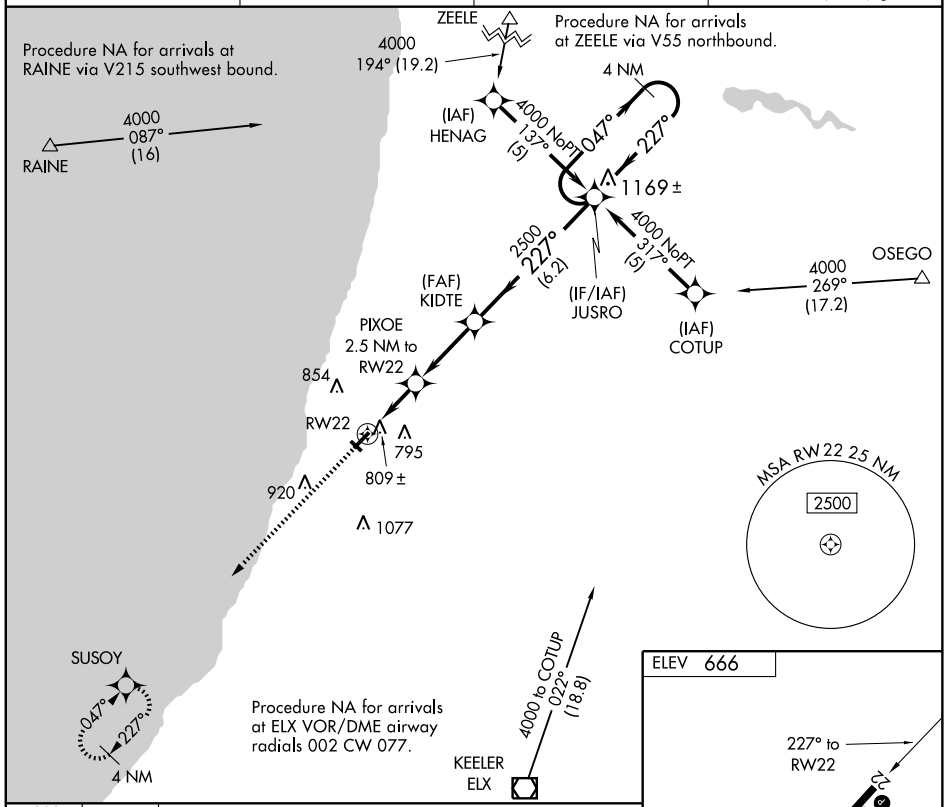
APP CRS	Rwy ldg	4801
227°	TDZE	665
	Apt Elev	666

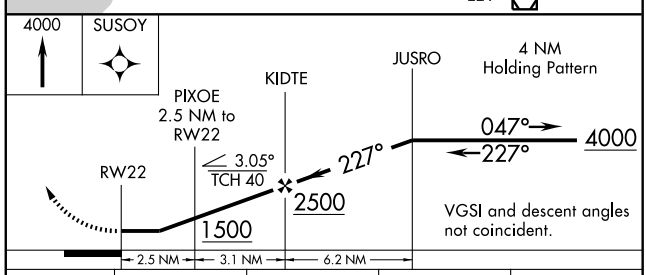
RNAV (GPS) RWY 22
SOUTH HAVEN AREA RGNL (LWA)

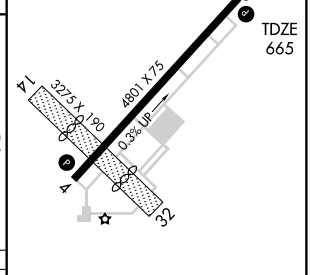
When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase LNAV Cat C, D visibility ½ mile, and Circling Cat D visibility ¼ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 4000 direct SUSOY and hold. Continue climb-in-hold to 4000.

AWOS-3	SOUTH BEND APP CON ★	GCO	UNICOM
118.025	118.55 257.8	121.725	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1060-1 395 (400-1)			1060-1¼ 395 (400-1¼)
CIRCLING	1120-1 454 (500-1)		1120-1½ 454 (500-1½)	1280-2 614 (700-2)

REIL Rwys 4 and 22 L
MIRL Rwy 4-22 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME PMM	APP CRS	Rwy ldg	4801
112.1	224°	TDZE	665
Chan 58		Apt Elev	666

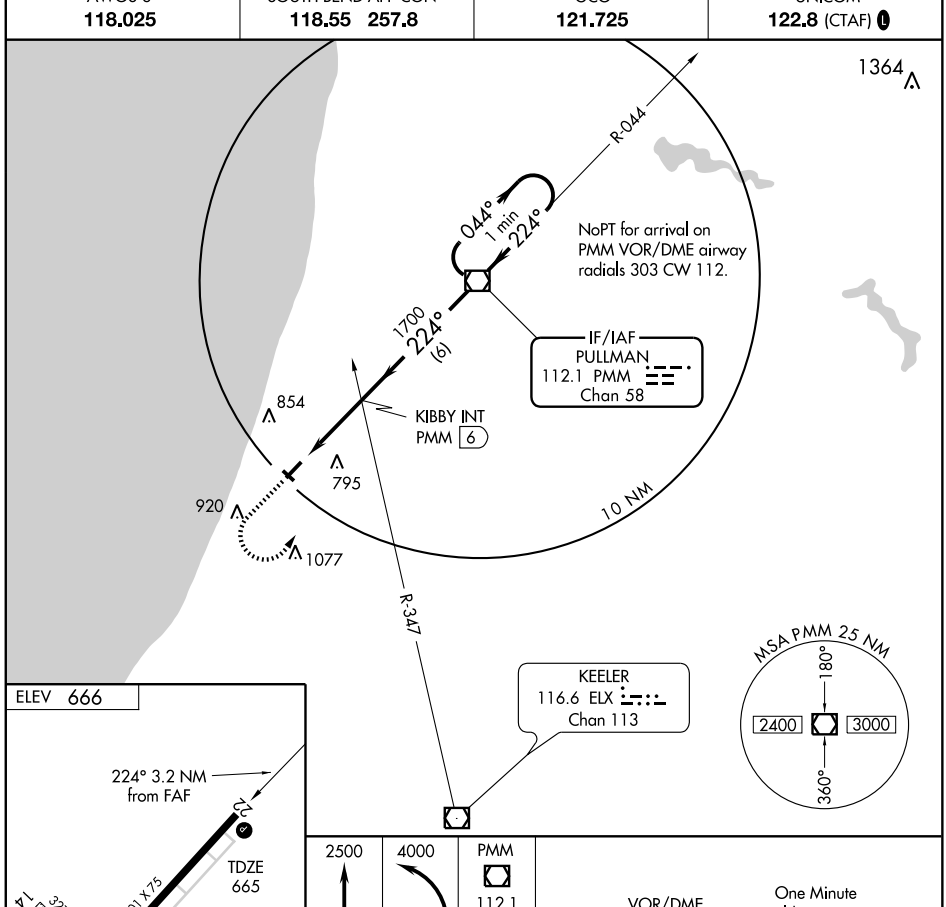
VOR RWY 22

SOUTH HAVEN AREA RGNL (LWA)

When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 120 feet. Increase S-22 visibility Cat C ¼ mile, Cat D ½ mile and Circling Cat D ¼ mile. Visibility reduction by helicopters NA.

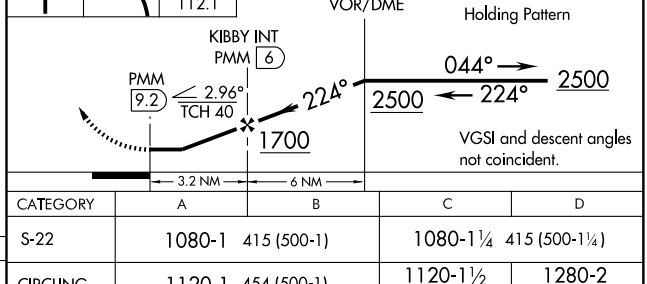
MISSED APPROACH: Climb to 2500 then climbing left turn to 4000 direct PMM VOR/DME and hold.

AWOS-3	SOUTH BEND APP CON ★	GCO	UNICOM
118.025	118.55 257.8	121.725	122.8 (CTAF) L



REIL Rwys 4 and 22 L
MIRL Rwy 4-22 L

FAF to MAP 3.2 NM					
Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04



CATEGORY	A	B	C	D
S-22	1080-1 415 (500-1)		1080-1¼ 415 (500-1¼)	
CIRCLING	1120-1 454 (500-1)		1120-1½ 454 (500-1½)	1280-2 614 (700-2)

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4033
066°	TDZE	775
	Apt Elev	775

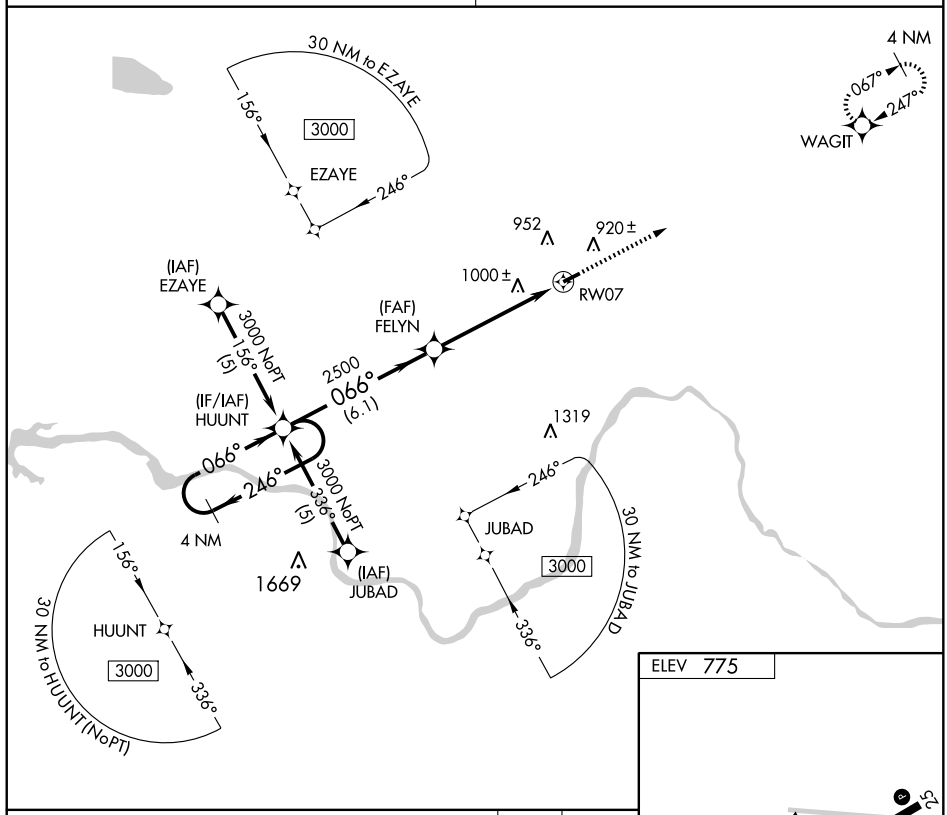
RNAV (GPS) RWY 7

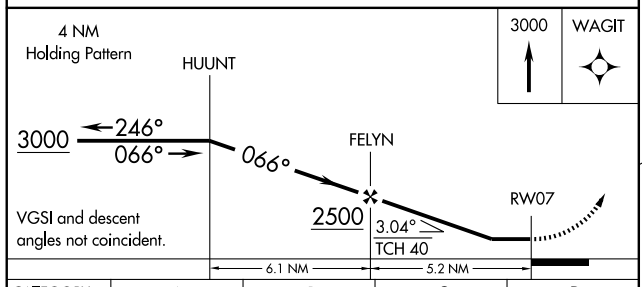
SPARTA / PAUL C. MILLER - SPARTA (8D4)

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 60 feet.

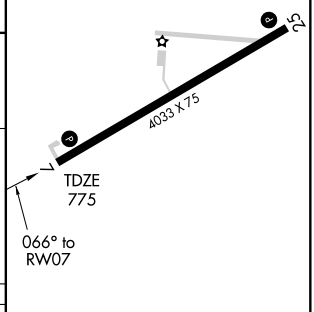
MISSED APPROACH: Climb to 3000 direct WAGIT and hold.

GRAND RAPIDS APP CON ★	UNICOM
124.6 257.6	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1340-1	565 (600-1)	NA	
CIRCLING	1340-1	565 (600-1)	NA	



MIRL Rwy 7-25 L
REIL Rwy 7 and 25

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4033
247°	TDZE	775
	Apt Elev	775

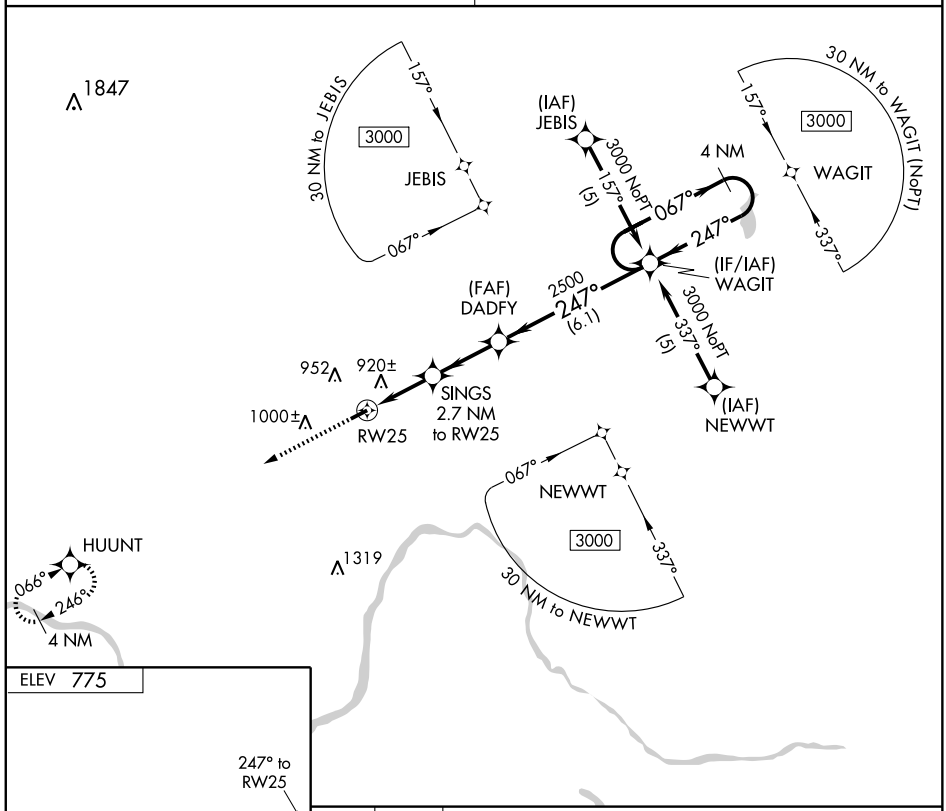
RNAV (GPS) RWY 25

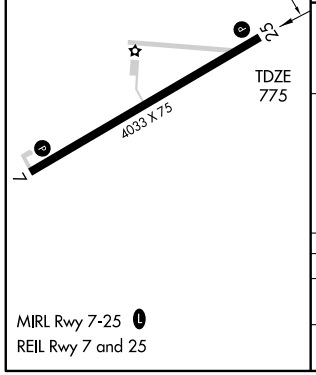
SPARTA / PAUL C. MILLER - SPARTA (8D4)

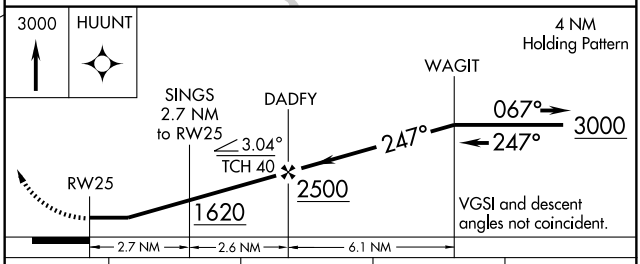
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climb to 3000 direct HUUNT and hold.

GRAND RAPIDS APP CON ★	UNICOM
124.6 257.6	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1220-1 445 (500-1)		NA	
CIRCLING	1280-1 505 (600-1)	1320-1 545 (600-1)	NA	

MIRL Rwy 7-25 L
REIL Rwy 7 and 25

VORTAC MKG 115.2 Chan 99	APP CRS 280°	Rwy ldg N/A TDZE N/A Apt Elev 775

VOR-A

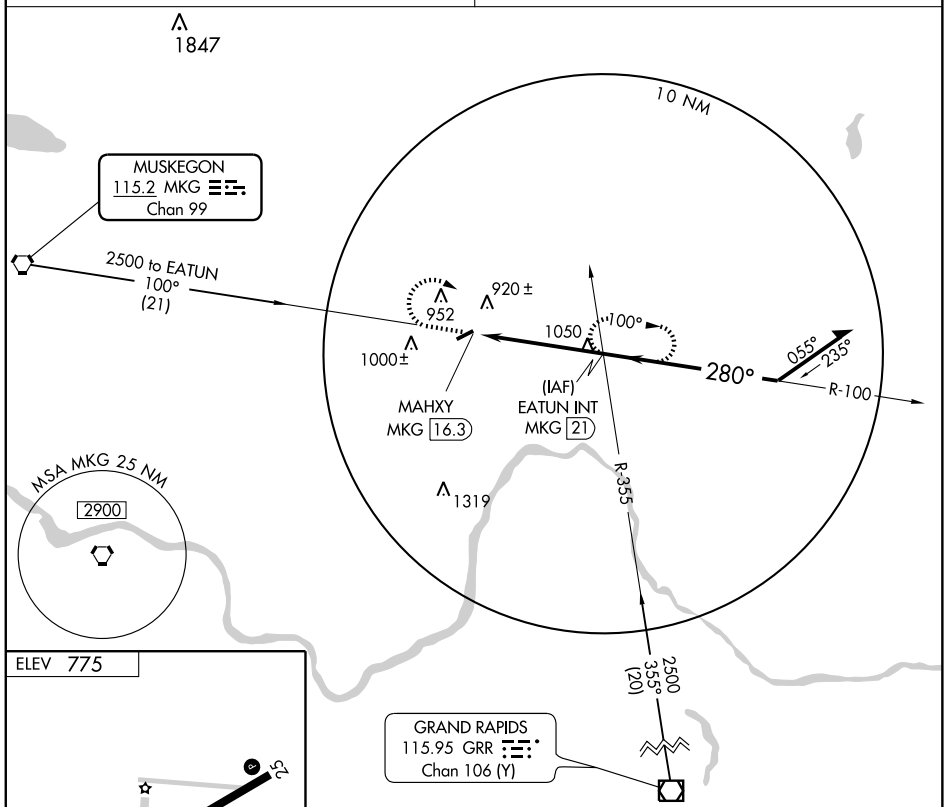
SPARTA / PAUL C. MILLER - SPARTA (8D4)

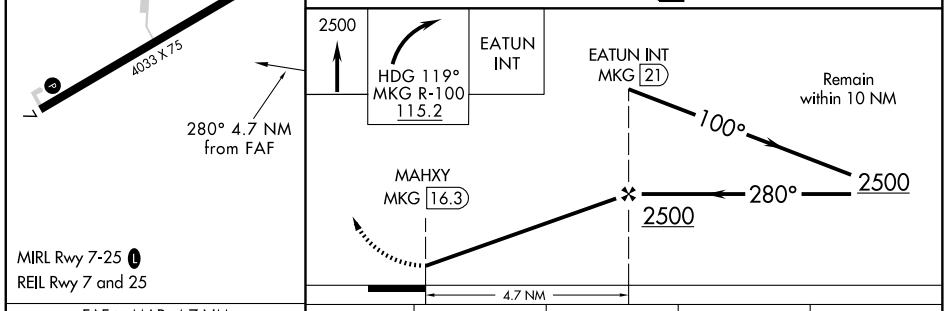
When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climb to 2500 then right turn via heading 119° and MKG R-100 to EATUN INT/MKG 21 DME and hold.

GRAND RAPIDS APP CON ★ 124.6 257.6

UNICOM 122.8 (CTAF) L





MIRL Rwy 7-25 L
REIL Rwy 7 and 25

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

CATEGORY	A	B	C	D
CIRCLING	1360-1 585 (600-1)		NA	

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3800
074°	TDZE	623
	Apt Elev	623

RNAV (GPS) RWY 7

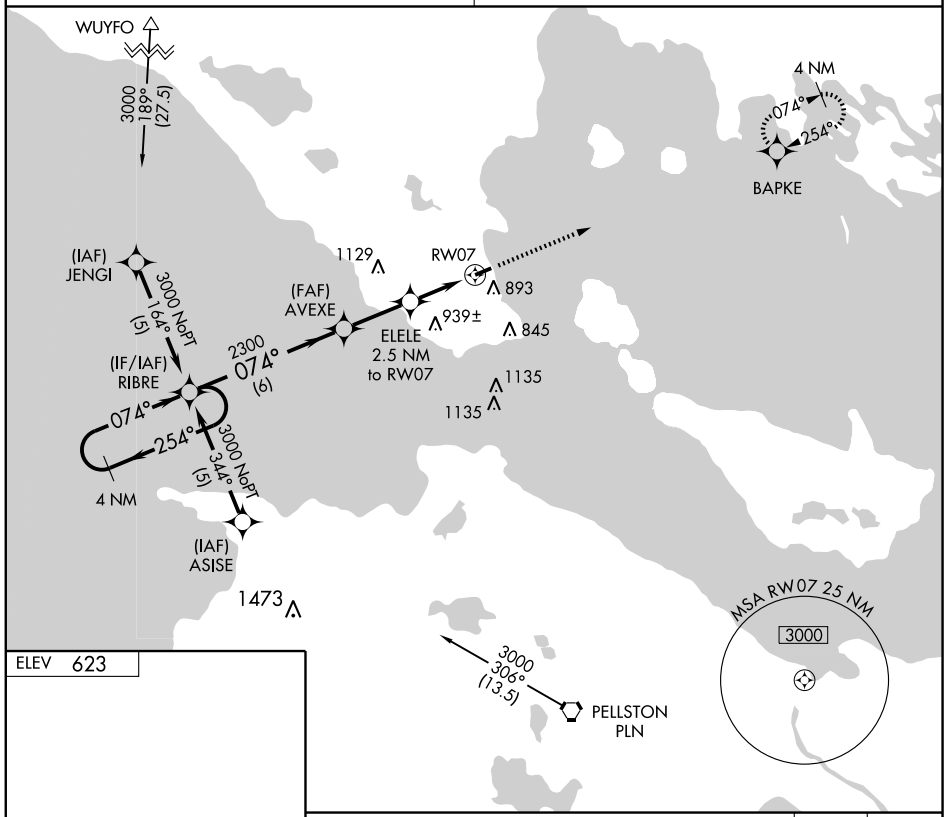
ST IGNACE / MACKINAC COUNTY (83D)

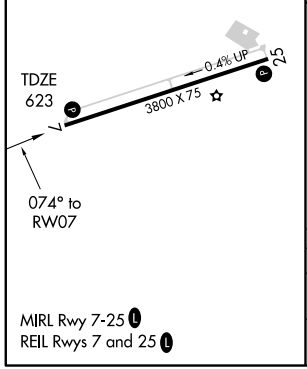
NA

Use Mackinac Island altimeter setting.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Circling NA at night south of Rwy 7-25.

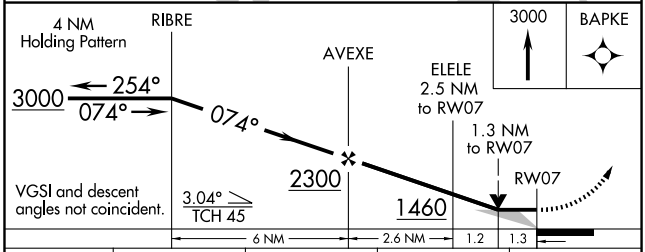
MISSED APPROACH: Climb to 3000 direct BAPKE WP and hold.

MINNEAPOLIS CENTER	UNICOM
134.6 354.05	122.7 (CTAF) L





MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L



CATEGORY	A	B	C	D
LNAV MDA	1200-1 577 (600-1)		1200-1½ 577 (600-1½)	NA
CIRCLING	1260-1 637 (700-1)		1260-1¾ 637 (700-1¾)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	3800
254°	TDZE	623
	Apt Elev	623

RNAV (GPS) RWY 25

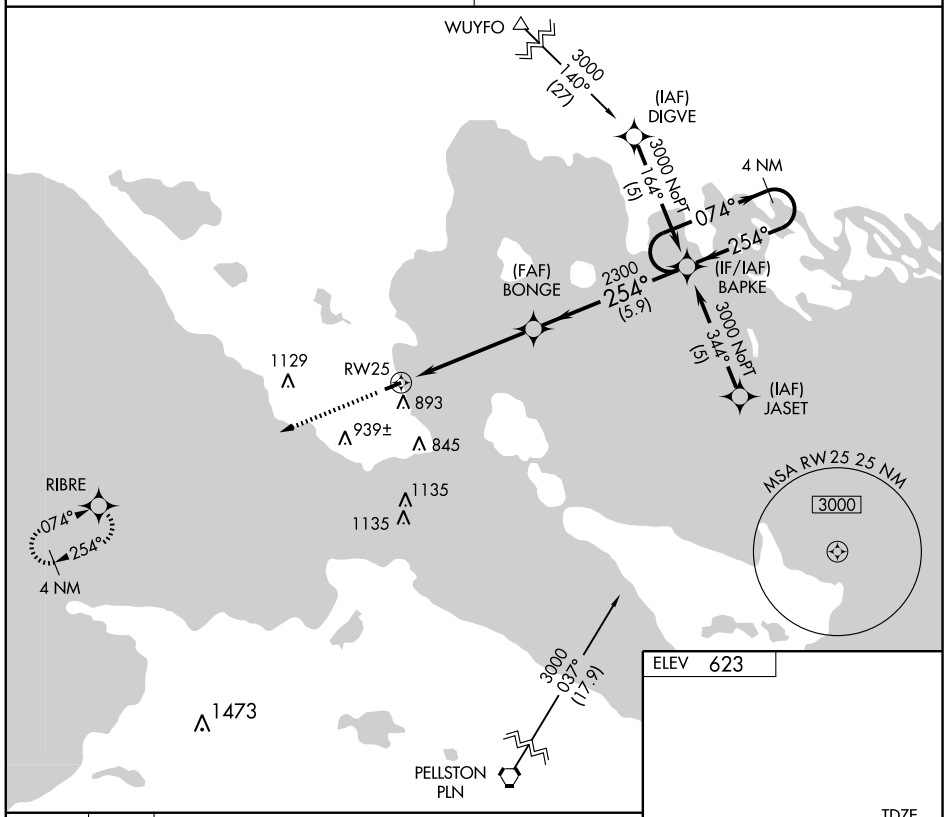
ST IGNACE / MACKINAC COUNTY (83D)

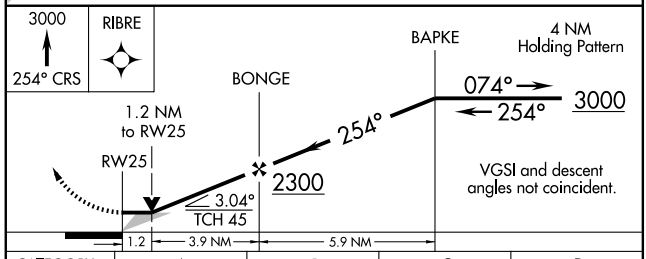
NA

Use Mackinac Island altimeter setting.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.
Circling NA at night south of RWY 7-25.

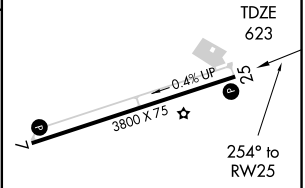
MISSED APPROACH: Climb to 3000 via 254° course to RIBRE WP and hold.

MINNEAPOLIS CENTER	UNICOM
134.6 354.05	122.7 (CTAF) L





ELEV 623



CATEGORY	A	B	C	D
LNAV MDA	1020-1 397 (400-1)			NA
CIRCLING	1260-1 637 (700-1)		1260-1¾ 637 (700-1¾)	NA

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB IRS	APP CRS	Rwy ldg / TDZE / Apt Elev
382	170°	5200 / 915 / 925

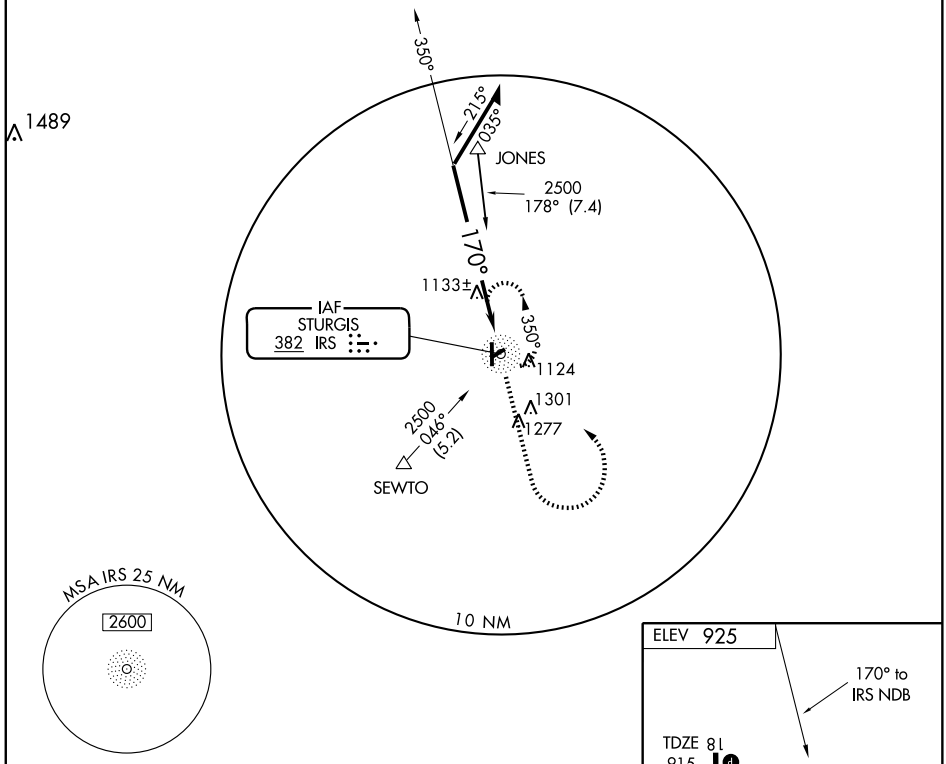
NDB RWY 18

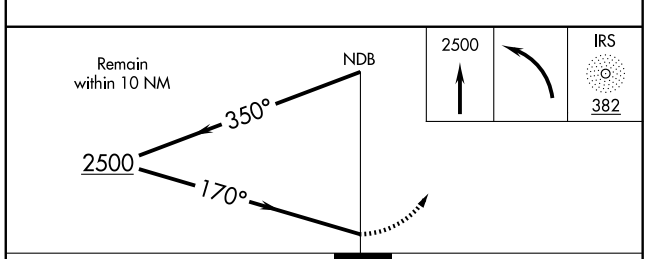
STURGIS/KIRSCH MUNI (IRS)

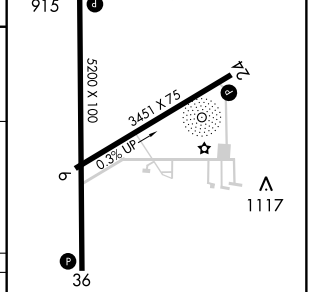
NA

MISSED APPROACH: Climb to 2500 then left turn direct IRS NDB and hold.

AWOS-3	KALAMAZOO APP CON ★	CLNC DEL	UNICOM
121.325	121.2 340.9	133.55	123.05 (CTAF) L







CATEGORY	A	B	C	D
S-18	1500-1	585 (600-1)	1500-1½ 585 (600-1½)	1500-1¾ 585 (600-1¾)
CIRCLING	1500-1	575 (600-1)	1500-1½ 575 (600-1½)	1620-2¼ 695 (700-2¼)

REIL Rwys 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB IRS	APP CRS	Rwy ldg	3451
382	236°	TDZE	925
		Apt Elev	925

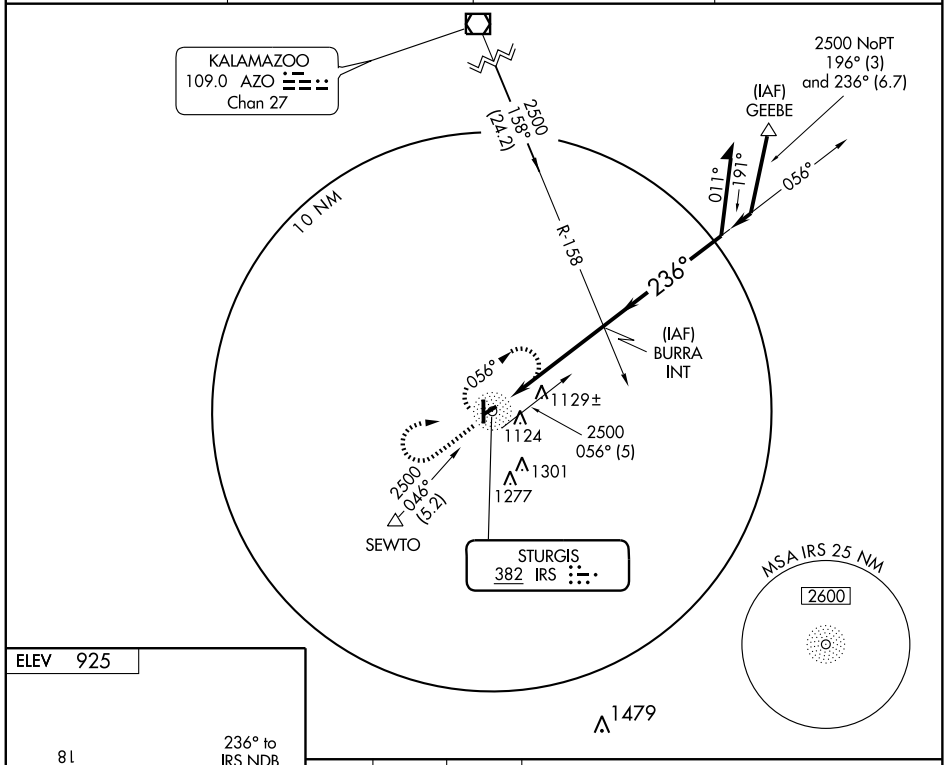
NDB RWY 24

STURGIS/KIRSCH MUNI (IRS)

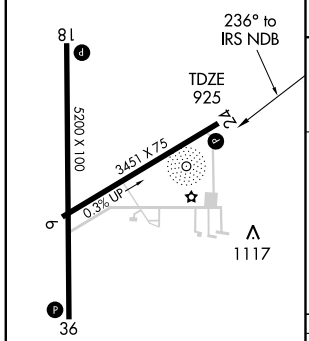
T
A NA

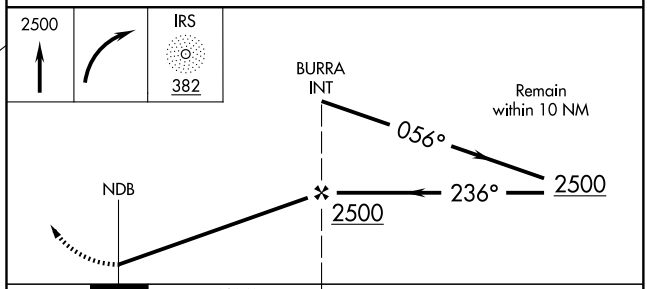
MISSED APPROACH: Climb to 2500 then right turn direct IRS NDB and hold.

AWOS-3	KALAMAZOO APP CON ★	CLNC DEL	UNICOM
121.325	121.2 340.9	133.55	123.05 (CTAF) L



ELEV 925





CATEGORY	A	B	C	D
S-24	1460-1	535 (600-1)	1460-1½ 535 (600-1½)	1460-1¾ 535 (600-1¾)
CIRCLING	1460-1	535 (600-1)	1460-1½ 535 (600-1½)	1620-2¼ 695 (700-2¼)

REIL Rwys 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5200
184°	TDZE	914
	Apt Elev	925

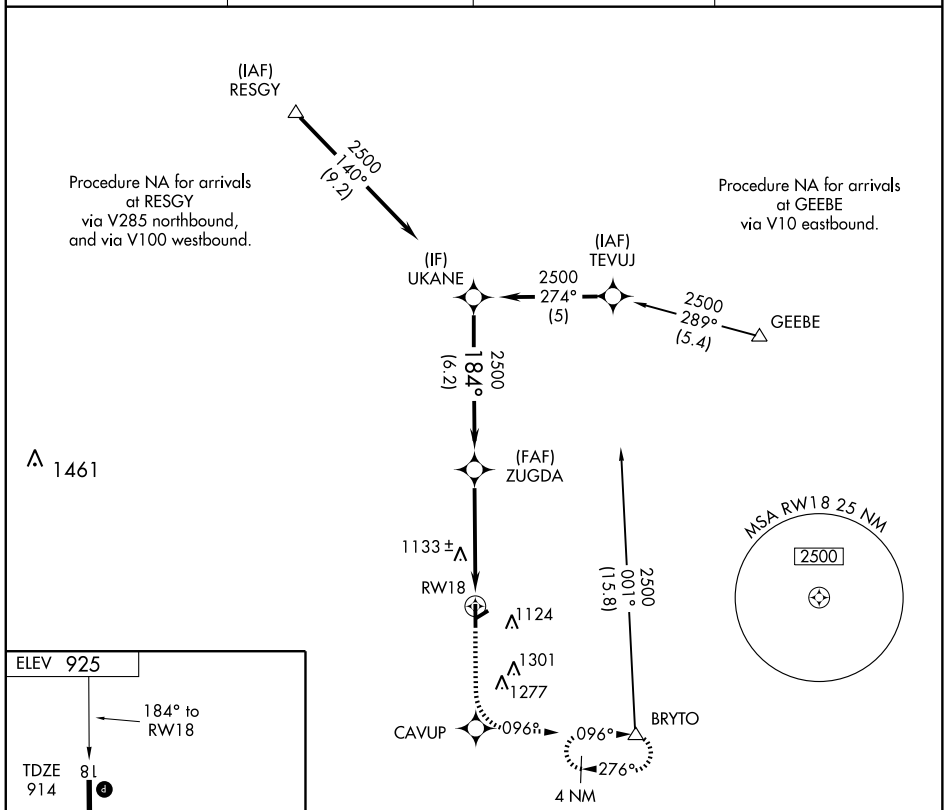
RNAV (GPS) RWY 18

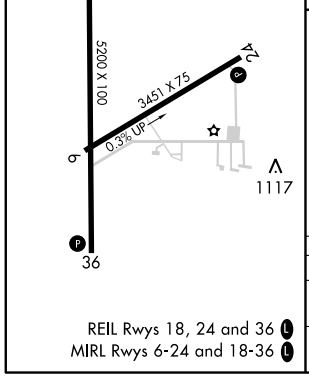
STURGIS/KIRSCH MUNI (IRS)

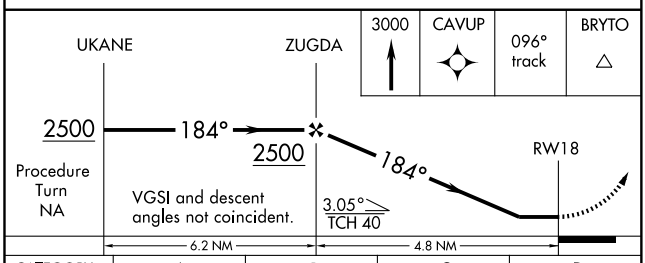
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Three Rivers altimeter setting and increase all MDAs 40 feet and LNAV Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct CAVUP and via 096° track to BRYTO and hold.

AWOS-3	KALAMAZOO APP CON ★	CLNC DEL	UNICOM
121.325	121.2 340.9	133.55	123.05 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1400-1	486 (500-1)	1400-1¼ 486 (500-1¼)	1400-1½ 486 (500-1½)
CIRCLING	1420-1	495 (500-1)	1440-1½ 515 (600-1½)	1620-2¼ 695 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

WAAS CH 42915 W36A	APP CRS 004°	Rwy ldg 5200 TDZE 915 Apt Elev 924

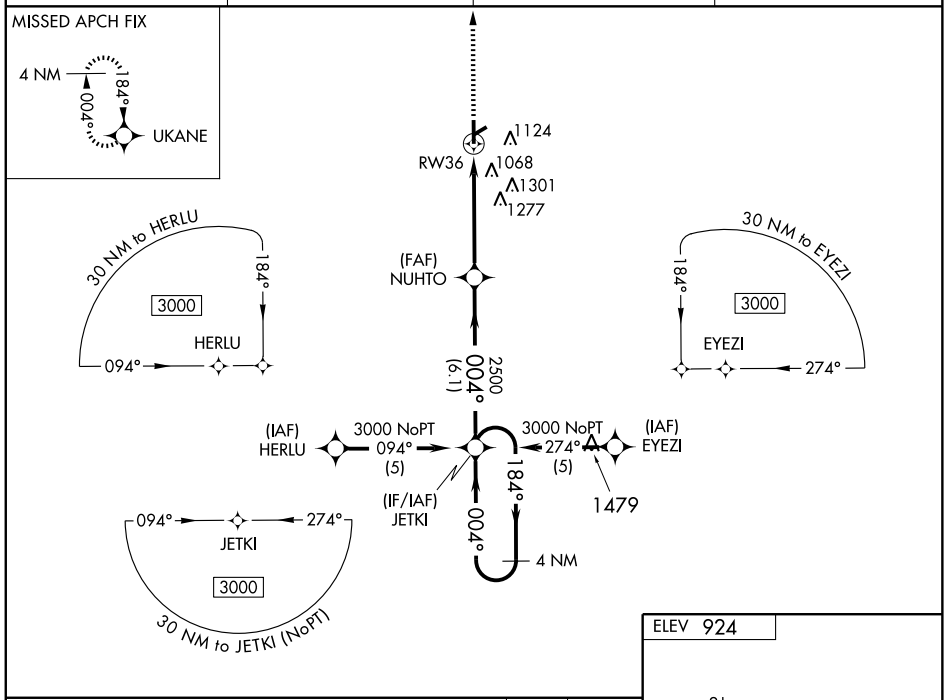
RNAV (GPS) RWY 36

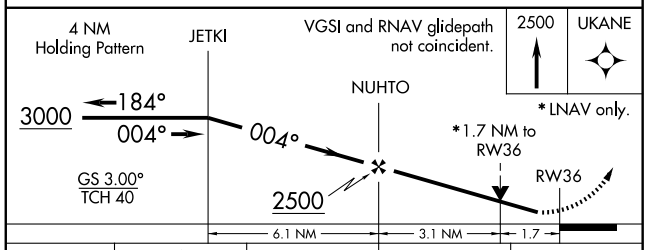
STURGIS/KIRSCH MUNI (IRS)

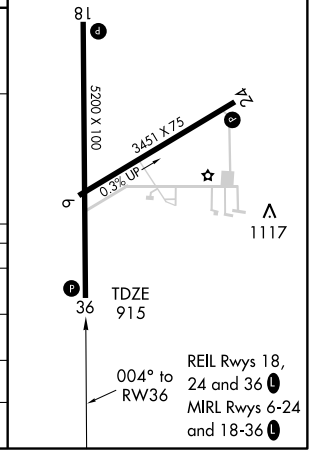
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Three Rivers altimeter setting and increase all DA/MDA 40 feet, increase LNAV/VNAV all Cats and LNAV Cat C/D visibility ¼ mile. VDP NA when using Three Rivers altimeter setting. Baro-VNAV NA when using Three Rivers altimeter setting.

MISSED APPROACH: Climb to 2500 direct UKANE and hold.

AWOS-3	KALAMAZOO APP CON ★	CLNC DEL	UNICOM
121.325	121.2 340.9	133.55	123.05 (CTAF) L



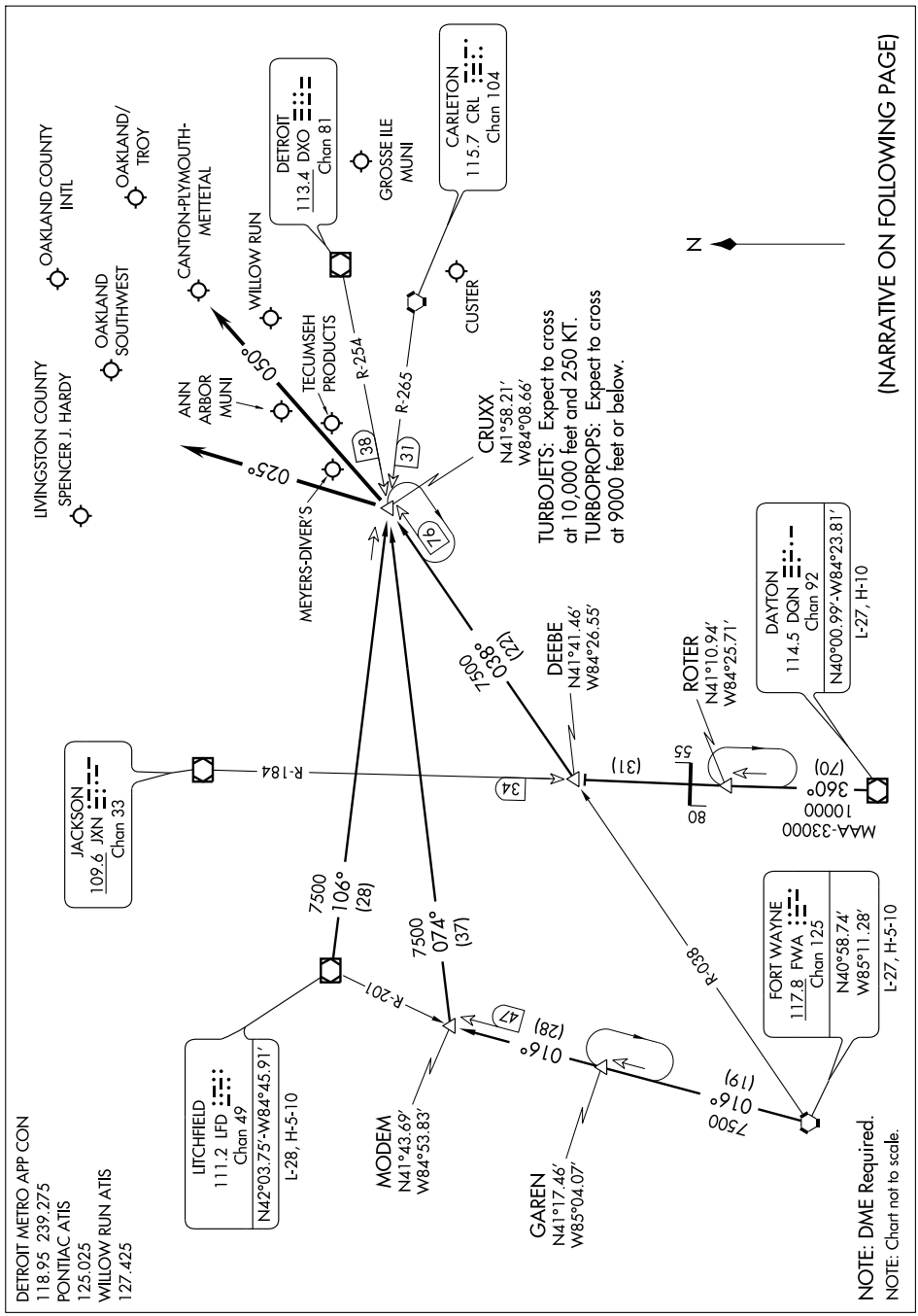




CATEGORY	A	B	C	D
LPV DA	1178-1 263 (300-1)			
LNAV/VNAV DA	1354-1½ 439 (500-1½)			
LNAV MDA	1480-1 565 (600-1)		1480-1½ 565 (600-1½)	1480-1¾ 565 (600-1¾)
CIRCLING	1480-1 556 (600-1)		1480-1½ 556 (600-1½)	1620-2¼ 696 (700-1¼)

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

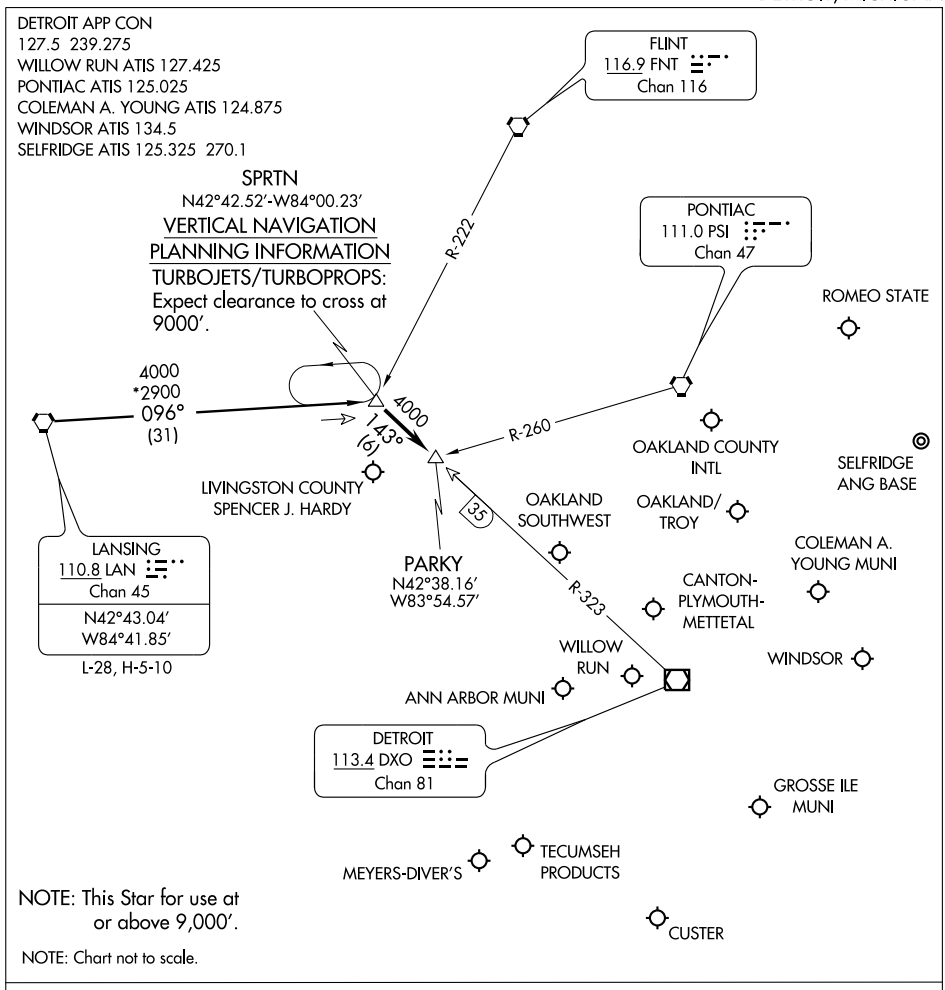
EC-1, 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

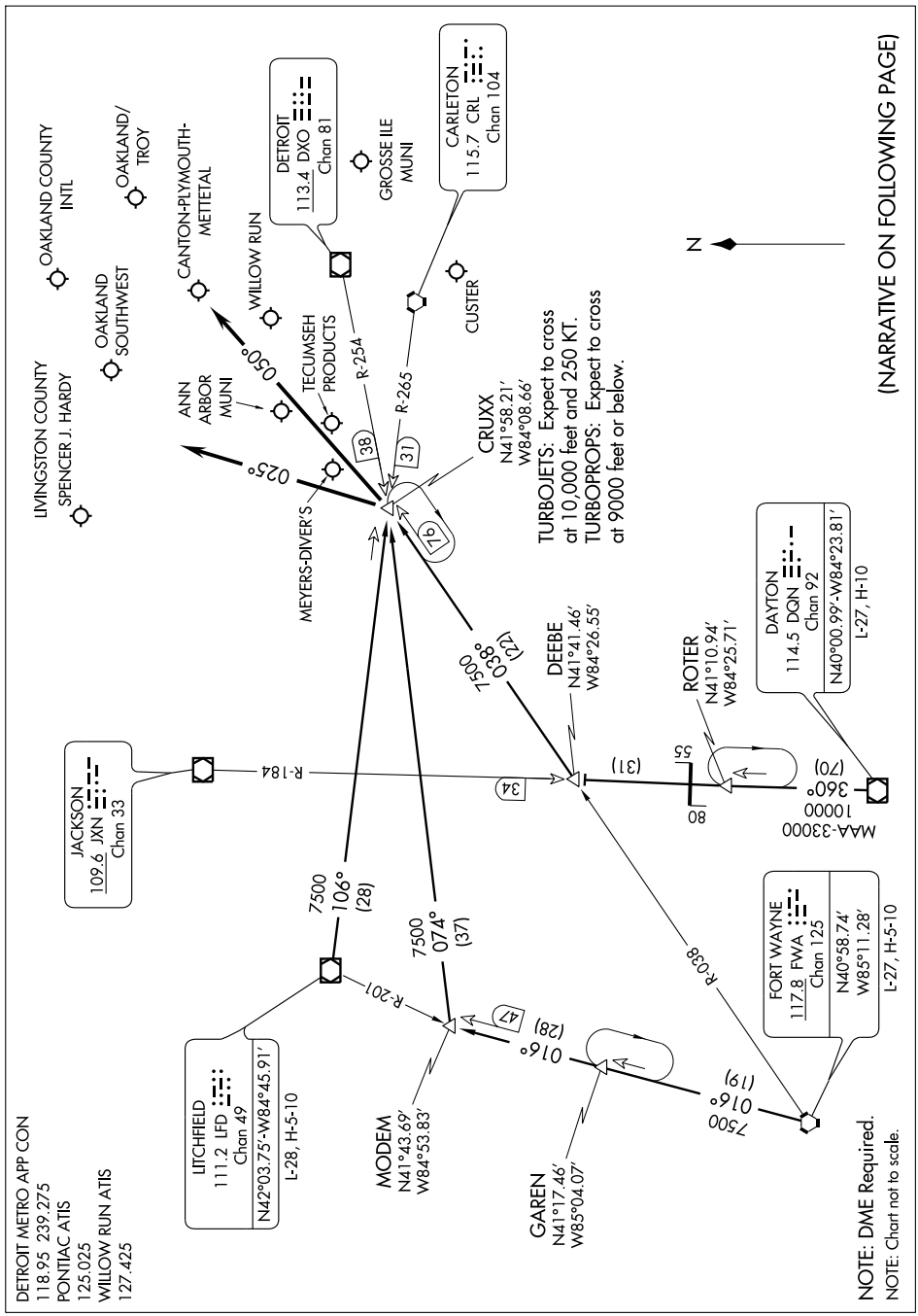
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

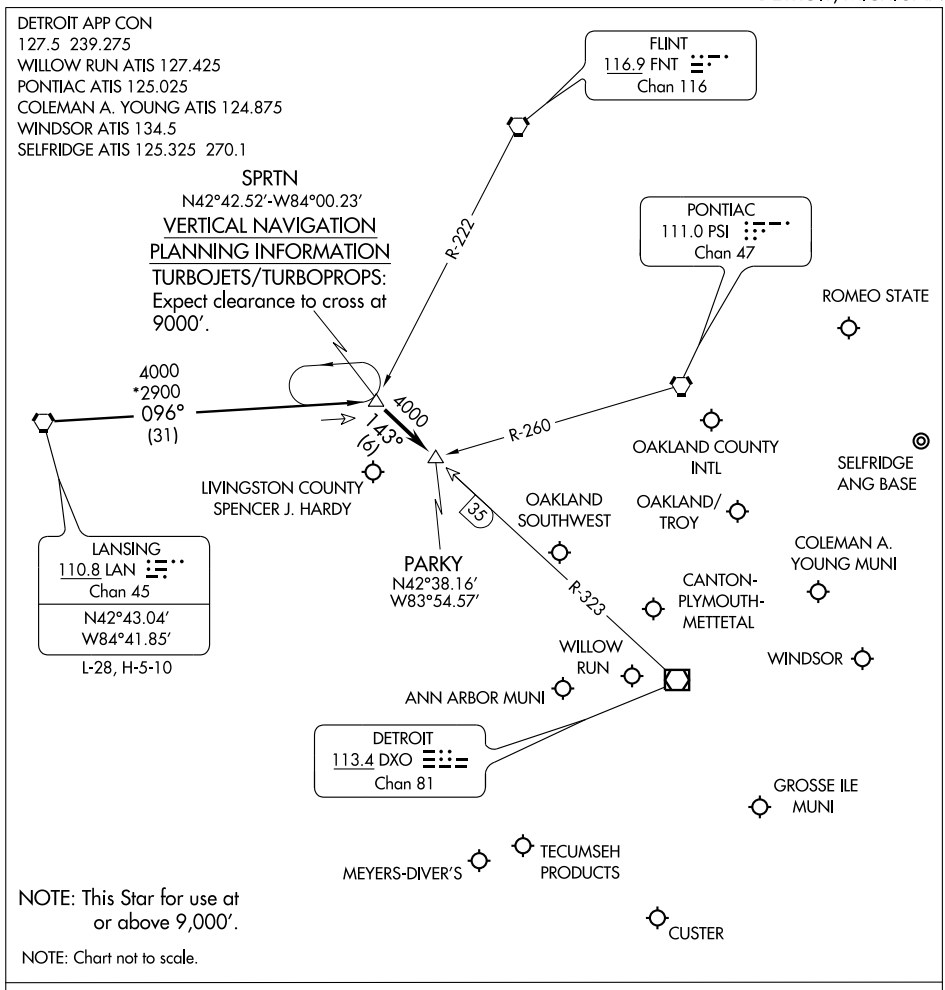
EC-1, 14 JAN 2010 to 11 FEB 2010

(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

VORTAC CRL 115.7 Chan 104	APP CRS 269°	Rwy ldg N/A TDZE N/A Apt Elev 815

VOR or GPS-A

TECUMSEH/ MEYERS-DIVERS (3TE)

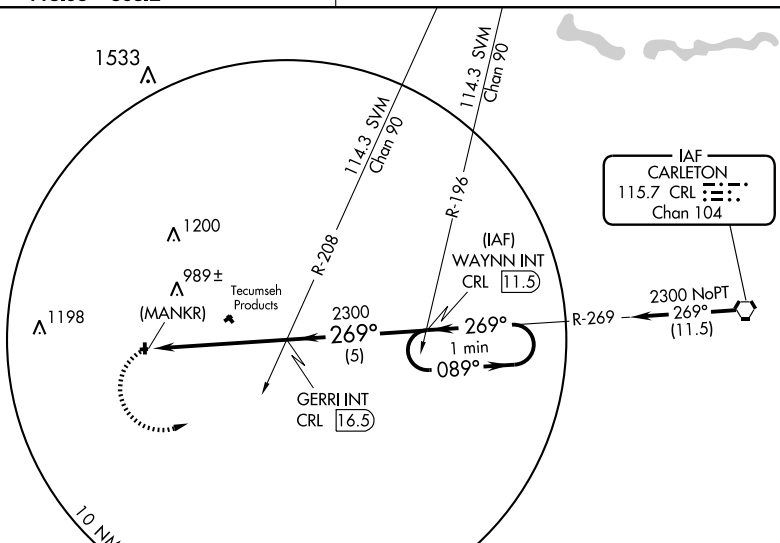
Use Detroit Willow Run altimeter setting.

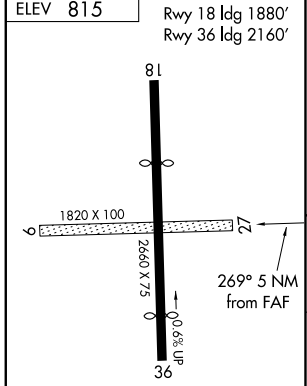
NA

MISSED APPROACH: Climbing left turn to 2300 via CRL R-269 to WAYNN 11.5 DME and hold.

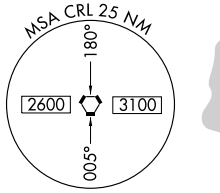
DETROIT METROPOLITAN WAYNE COUNTY APP CON
118.95 363.2

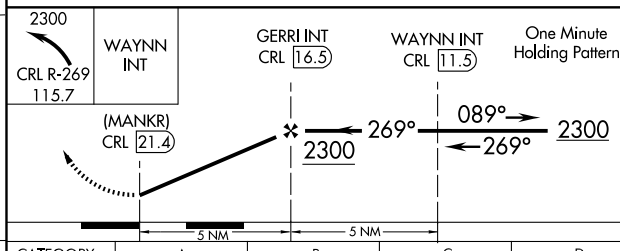
CTAF (L) 122.9





LIRL Rwy 18-36 (L)





FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

CATEGORY	A	B	C	D
CIRCLING	1380-1 565 (600-1)	1380-1¼ 565 (600-1¼)	NA	

EC-1. 14 JAN 2010 to 11 FEB 2010

NDB HAI	APP CRS	Rwy ldg	4000
407	252°	TDZE	823
		Apt Elev	824

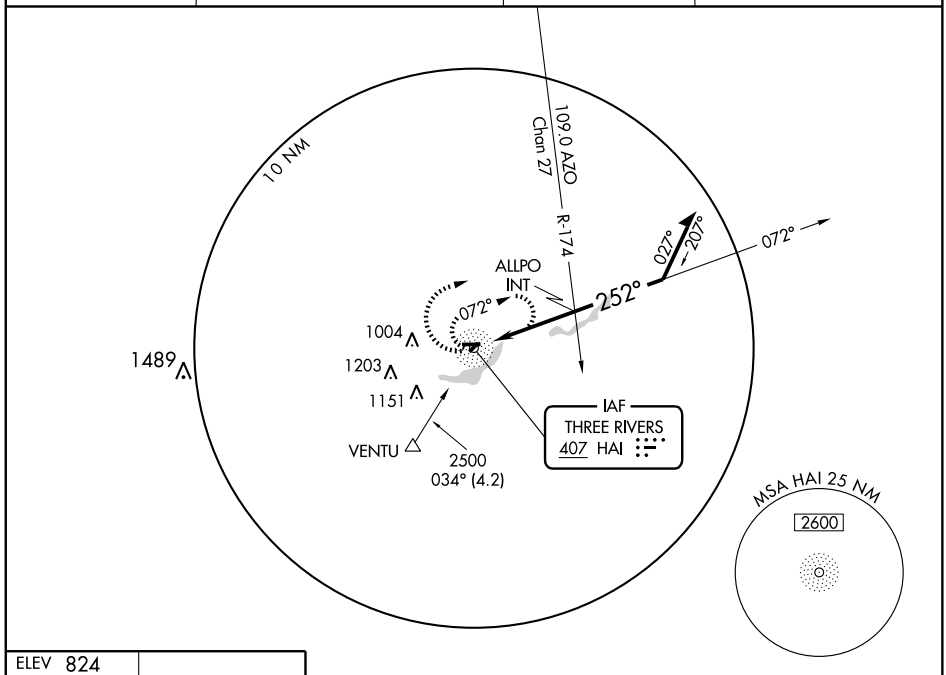
NDB RWY 27

THREE RIVERS MUNI DR. HAINES (HAI)

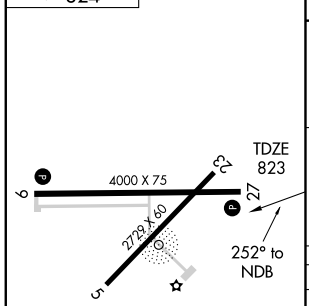
NA Use Kalamazoo altimeter setting; when not received, use South Bend altimeter setting and increase all MDAs 100 feet and all visibilities ½ mile.

MISSED APPROACH: Climbing right turn to 2500 in HAI NDB holding pattern.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
119.975	121.2 340.9	121.725	122.8 (CTAF) L

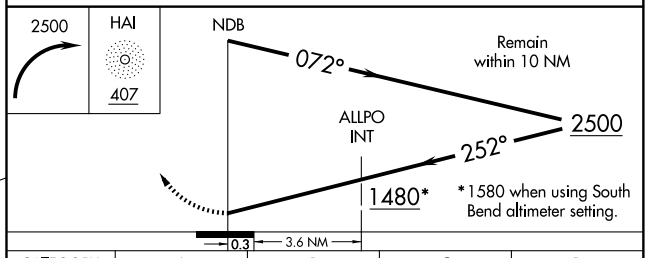


ELEV 824



REIL Rwys 9 and 27
MIRL Rwys 5-23 and 9-27 L

Knots	60	90	120	150	180
Min:Sec					



CATEGORY	A	B	C	D
S-27	1480-1 657 (700-1)		1480-1¾ 657 (700-1¾)	NA
CIRCLING	1480-1 656 (700-1)		1480-1¾ 656 (700-1¾)	NA
ALLPO FIX MINIMUMS				
S-27	1380-1 557 (600-1)		1380-1½ 557 (600-1½)	NA
CIRCLING	1380-1 556 (600-1)		1420-1½ 596 (600-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	4000
274°	TDZE	823
	Apt Elev	824

RNAV (GPS) RWY 27

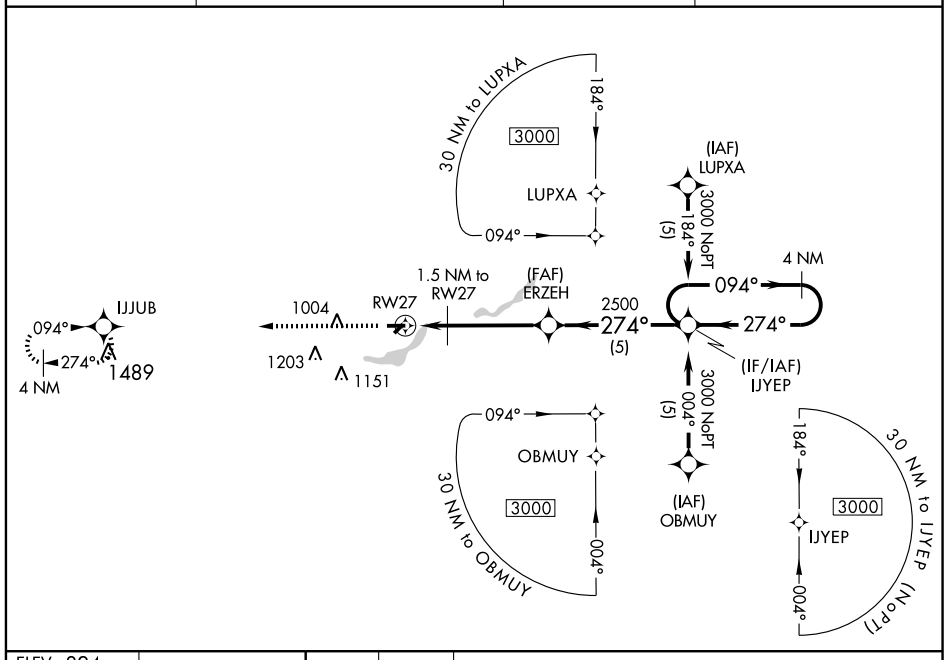
THREE RIVERS MUNI DR. HAINES (HAI)

NA

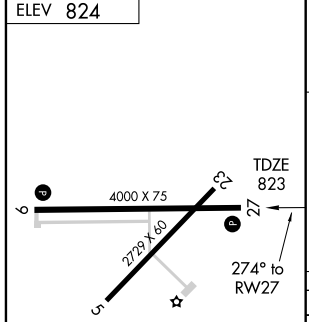
Obtain local altimeter setting on CTAF; when not received, use South Bend altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

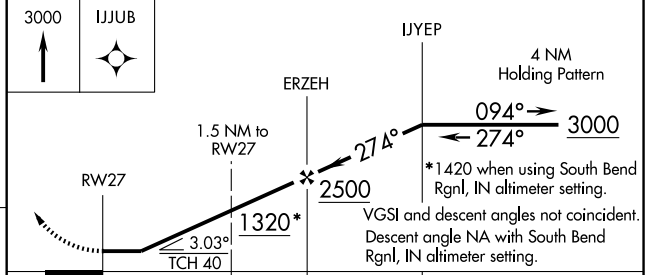
MISSED APPROACH: Climb to 3000 direct IJJUB WP and hold.

AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
119.975	121.2 340.9	121.725	122.8 (CTAF) L



ELEV 824





*1420 when using South Bend Rgnl, IN altimeter setting.

VGSI and descent angles not coincident. Descent angle NA with South Bend Rgnl, IN altimeter setting.

CATEGORY	A	B	C	D
LNAV MDA	1200-1 377 (400-1)		1200-1¼ 377 (400-1¼)	NA
CIRCLING	1260-1 436 (500-1)		1420-1¾ 596 (600-1¾)	NA
SOUTH BEND RGNL, IN ALTIMETER SETTING MINIMUMS				
LNAV MDA	1360-1 537 (600-1)		1360-1½ 537 (600-1½)	NA
CIRCLING	1420-1 596 (600-1)		1560-2 736 (800-2)	NA

REIL Rwys 9 and 27
MIRL Rwys 5-23 and 9-27 L

VOR/DME AZO 109.0 Chan 27	APP CRS 187°	Rwy ldg N/A TDZE N/A Apt Elev 824

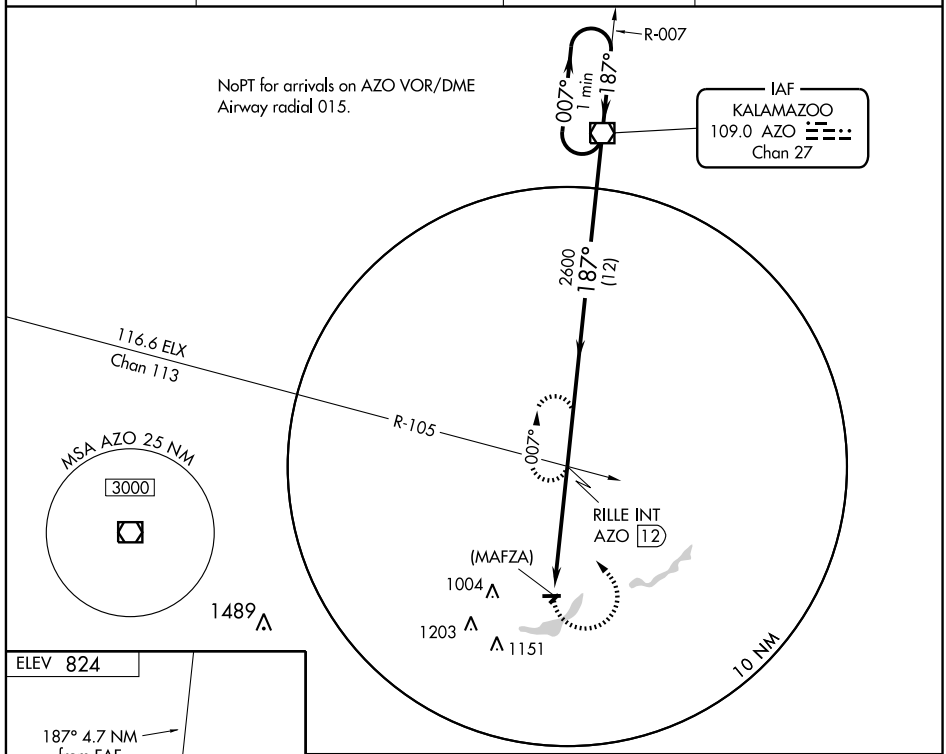
VOR or GPS-A

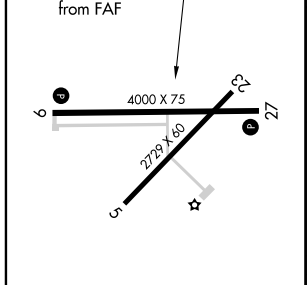
THREE RIVERS MUNI DR. HAINES (HAI)

NA Use Kalamazoo altimeter setting; when not received, use South Bend altimeter setting.

MISSED APPROACH: Climbing left turn to 2600 via AZO R-187 to RILLE Int and hold.

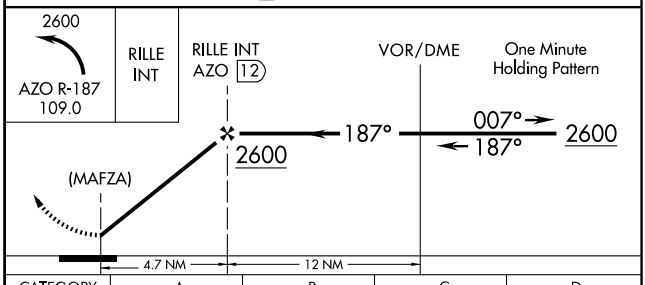
AWOS-3	KALAMAZOO APP CON ★	GCO	UNICOM
119.975	121.2 340.9	121.725	122.8 (CTAF) L





REIL Rwys 9 and 27
MIRL Rwys 5-23 and 9-27 L

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



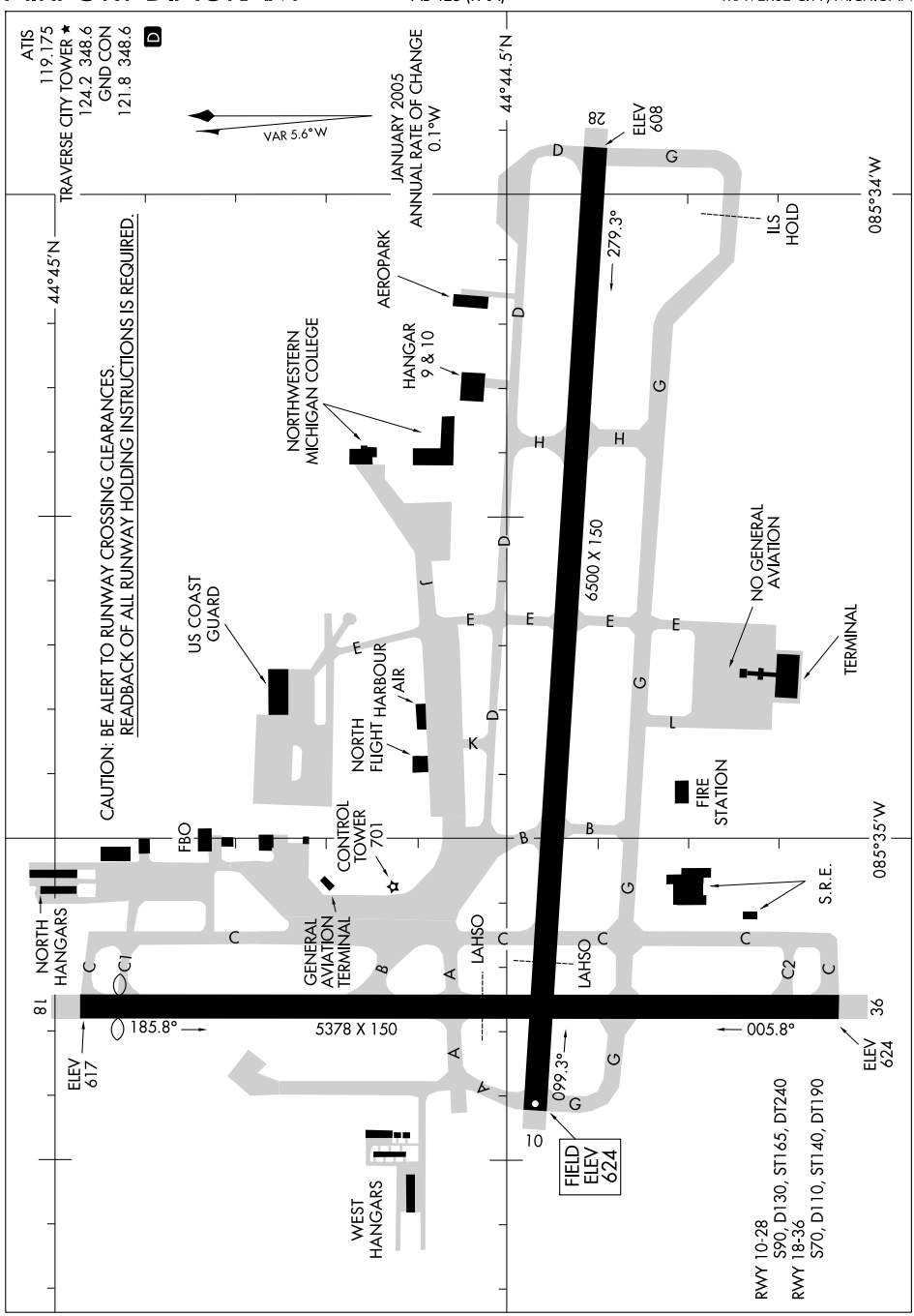
CATEGORY	A	B	C	D
CIRCLING	1320-1 496 (500-1)		1420-1½ 596 (600-1½)	NA
SOUTH BEND ALTIMETER SETTING MINIMUMS				
CIRCLING	1420-1 596 (600-1)		1520-1½ 696 (700-1½)	NA

EC-1. 14 JAN 2010 to 11 FEB 2010

AIRPORT DIAGRAM

AL-425 (FAA)

TRAVERSE CITY / CHERRY CAPITAL (TVC)
TRAVERSE CITY, MICHIGAN



APP CRS	Rwy ldg	5378
005°	TDZE	624
	Apt Elev	624

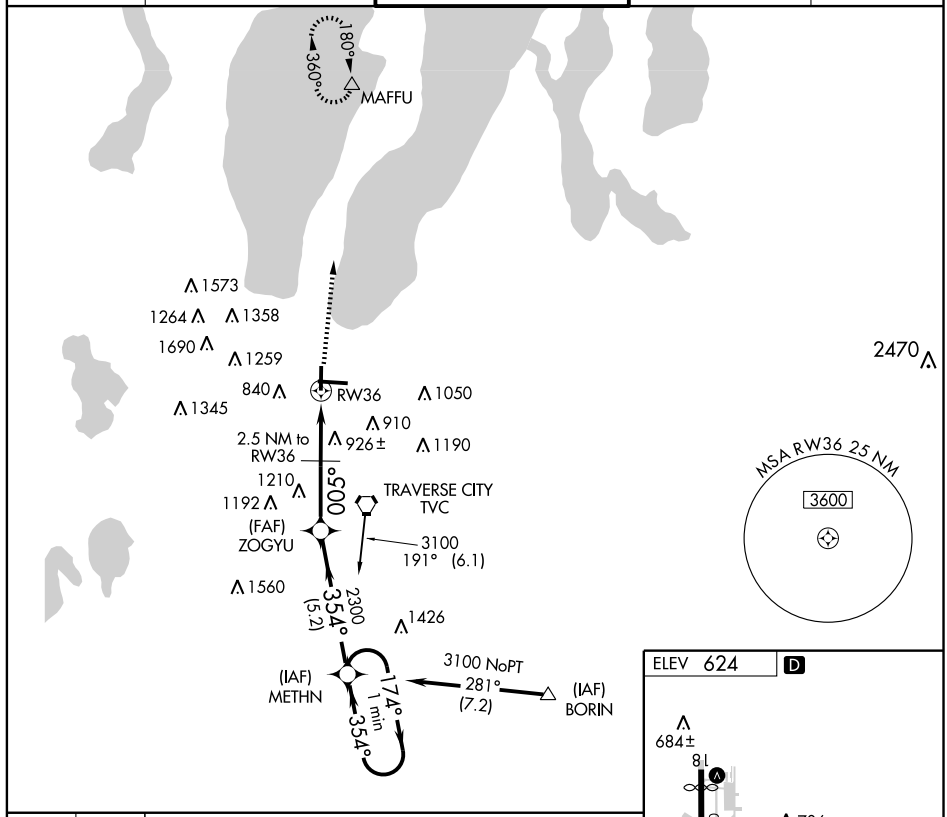
GPS RWY 36

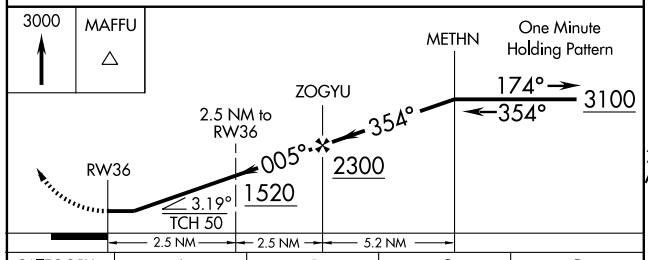
TRAVERSE CITY / CHERRY CAPITAL (TVC)

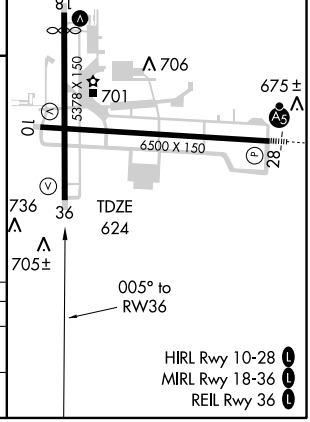
NA

MISSED APPROACH: Climb to 3000 direct MAFFU WP and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER ★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95







CATEGORY	A	B	C	D
S-36	1180-1 556 (600-1)		1180-1½ 556 (600-1½)	1180-1¾ 556 (600-1¾)
CIRCLING	1180-1 556 (600-1)		1260-1¾ 636 (700-1¾)	1300-2¼ 676 (700-2¼)

EC-1. 14 JAN 2010 to 11 FEB 2010

LOC I-TVC	APP CRS	Rwy ldg	6500
110.7	279°	TDZE	617
		Apt Elev	624

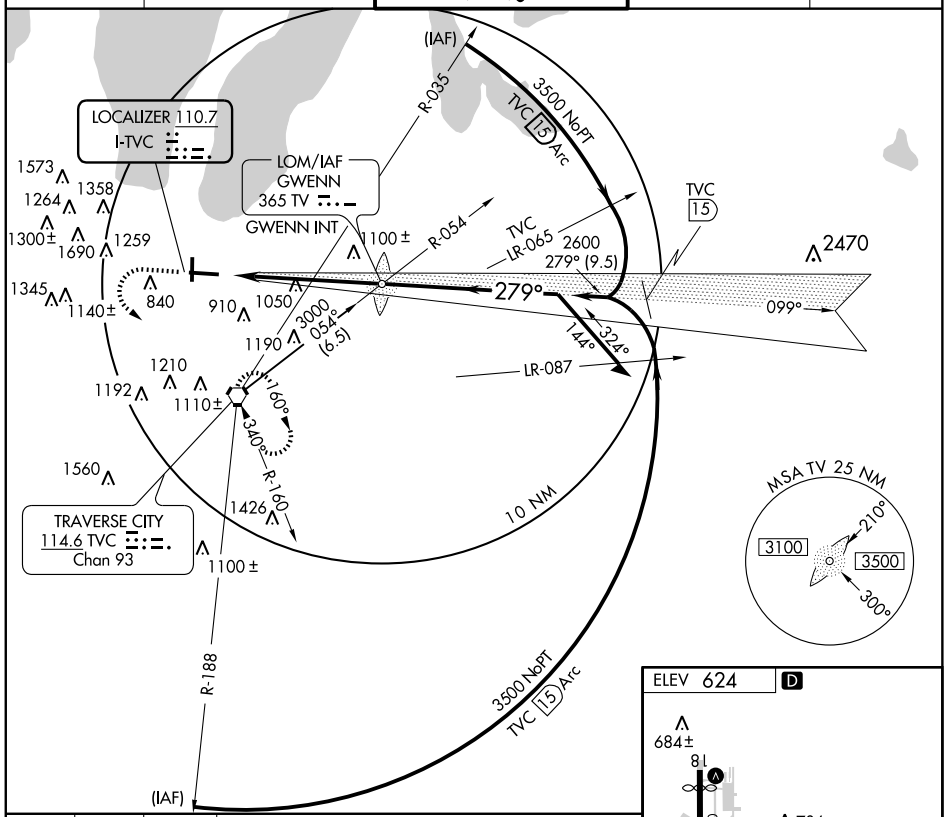
ILS RWY 28

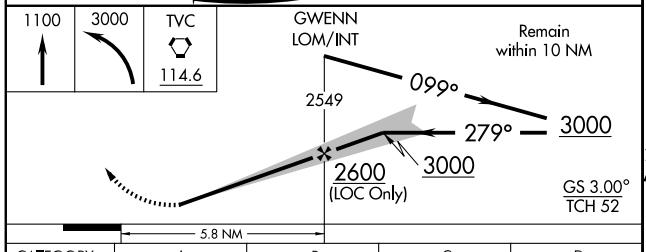
TRAVERSE CITY / CHERRY CAPITAL (TVC)

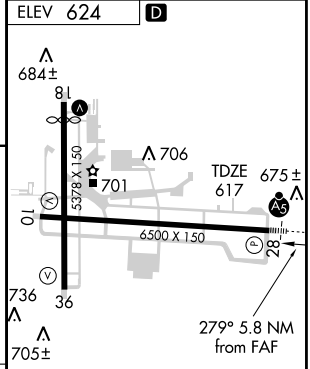
MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 3000 direct TVC VORTAC and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER ★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95







HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

CATEGORY	A	B	C	D
S-ILS 28	817-½ 200 (200-½)			
S-LOC 28	1360-½ 743 (800-½)	1360-¾ 743 (800-¾)	1360-1¾ 743 (800-1¾)	1360-2 743 (800-2)
CIRCLING	1360-1 736 (800-1)	1360-1¼ 736 (800-1¼)	1360-2¼ 736 (800-2¼)	1360-2½ 736 (800-2½)

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

EC-1. 14 JAN 2010 to 11 FEB 2010

LOM TV	APP CRS	Rwy ldg	6500
365	279°	TDZE	617
		Apt Elev	624

NDB or GPS RWY 28

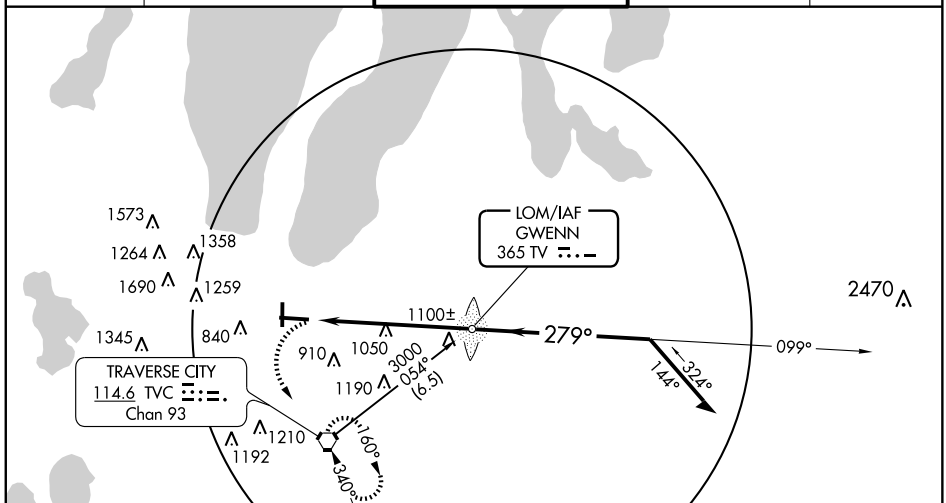
TRAVERSE CITY / CHERRY CAPITAL (TVC)

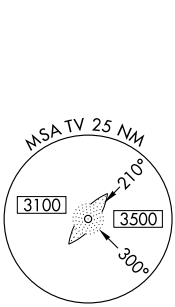
For inoperative MALSR increase Cat B S-28 visibility ½ mile.

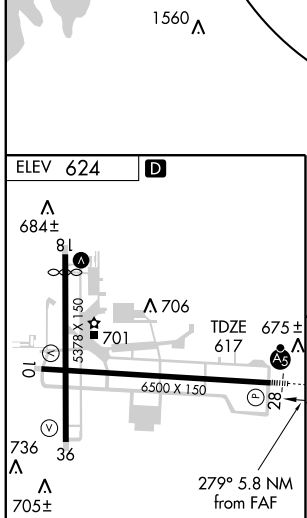
MALSR

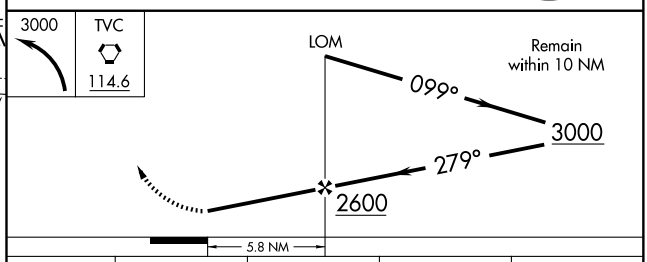
MISSED APPROACH: Climbing left turn to 3000 direct TVC VORTAC and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER ★	GND CON	UNICOM
119.175	132.9 338.3	124.2(CTAF)(L) 348.6	121.8 348.6	122.95









HIRL Rwy 10-28 (L)
MIRL Rwy 18-36 (L)
REIL Rwy 36 (L)

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

CATEGORY	A	B	C	D
S-28	1400-¾ 783 (800-¾)		1400-1¾ 783 (800-1¾)	1400-2¼ 783 (800-2¼)
CIRCLING	1400-1 776 (800-1)	1400-1¼ 776 (800-1¼)	1400-2¼ 776 (800-2¼)	1400-2½ 776 (800-2½)

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WAAS CH 42610 W10A	APP CRS 099°	Rwy ldg 6500 TDZE 624 Apt Elev 624

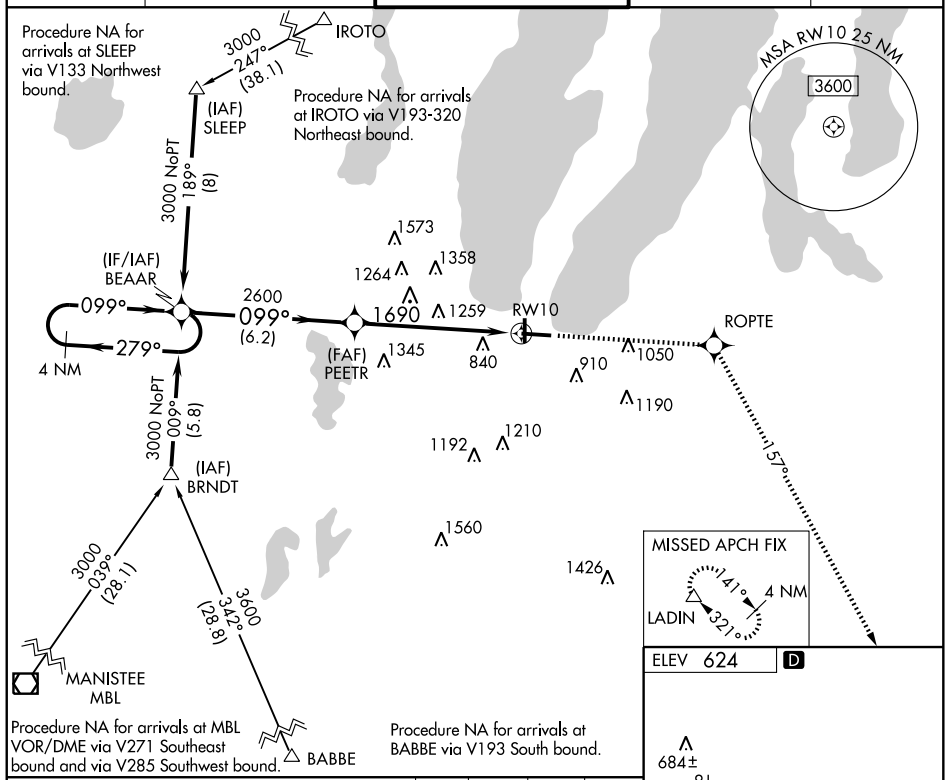
RNAV (GPS) RWY 10

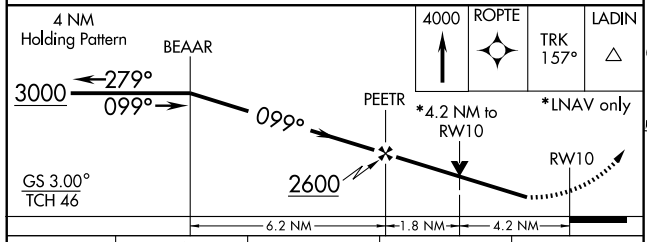
TRAVERSE CITY / CHERRY CAPITAL (TVC)

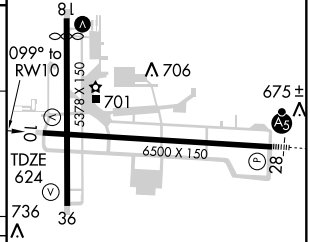
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.
When local altimeter setting not received, use Bellaire altimeter setting and increase DA 51 feet and all MDA 60 feet, increase LPV all Cats. visibility ¼ mile. VDP NA when using Bellaire altimeter setting.

MISSED APPROACH: Climb to 4000 direct ROPTE and via 157° track to LADIN and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95







CATEGORY	A	B	C	D
LPV DA	968-1¼ 344 (400-1¼)			
LNAV MDA	2000-1¼ 1376 (1400-1¼)	2000-1½ 1376 (1400-1½)	2000-3 1376 (1400-3)	
CIRCLING	2000-1¼ 1376 (1400-1¼)	2000-1½ 1376 (1400-1½)	2000-3 1376 (1400-3)	

HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1. 14 JAN 2010 to 11 FEB 2010

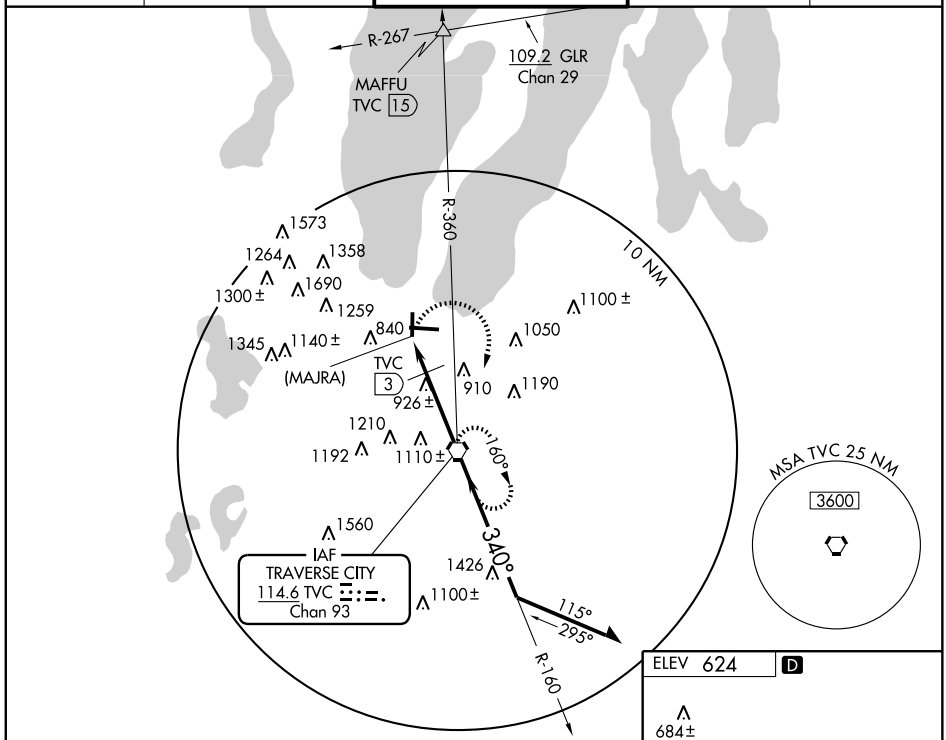
VORTAC TVC	APP CRS	Rwy ldg	N/A
114.6	340°	TDZE	N/A
Chan 93		Apt Elev	624

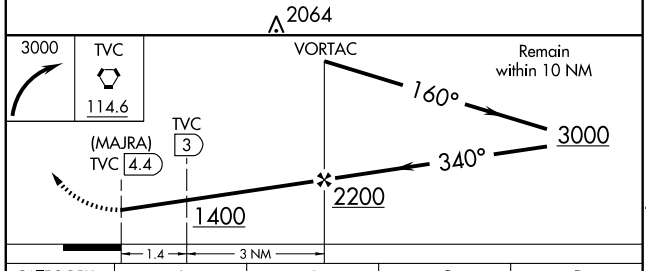
VOR or TACAN or GPS-A

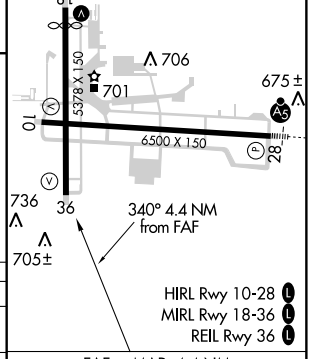
TRAVERSE CITY / CHERRY CAPITAL (TVC)

MISSED APPROACH: Climbing right turn to 3000 direct TVC VORTAC and hold. (TACAN aircraft climbing right turn to 3500 via TVC R-360 to MAFFU/Int 15 DME and hold N, RT, 180° inbound.)

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER ★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95







CATEGORY	A	B	C	D
CIRCLING	1400-1 776 (800-1)	1400-1¼ 776 (800-1¼)	1400-2¼ 776 (800-2¼)	1400-2½ 776 (800-2½)

DME MINIMUMS

CIRCLING	1300-1 676 (700-1)		1300-2 676 (700-2)	1300-2¼ 676 (700-2¼)

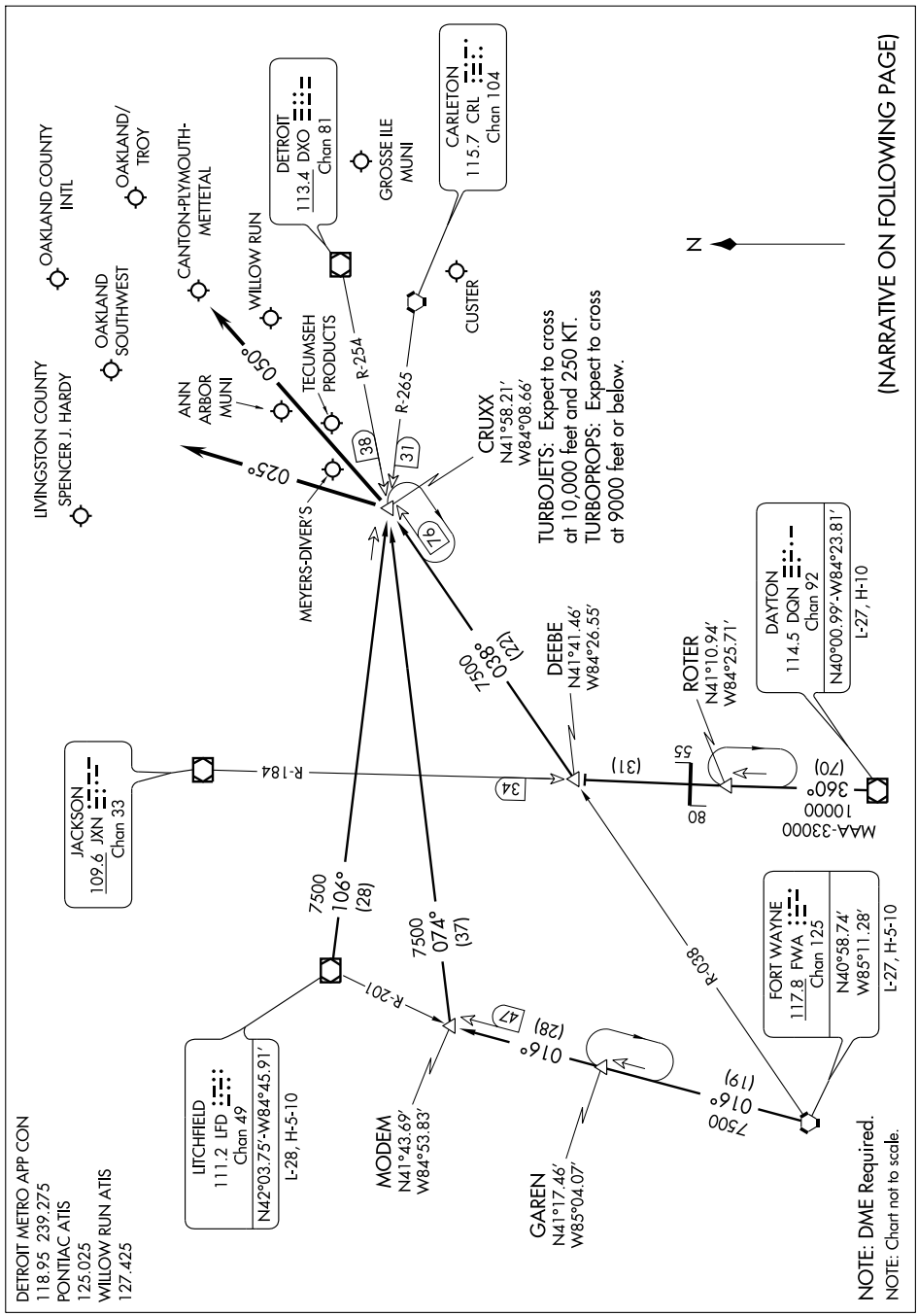
FAF to MAP 4.4 NM

Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

EC-1. 14 JAN 2010 to 11 FEB 2010

CRUXX FOUR ARRIVAL

DETROIT, MICHIGAN



CRUXX FOUR ARRIVAL (CRUXX.CRUXX4)

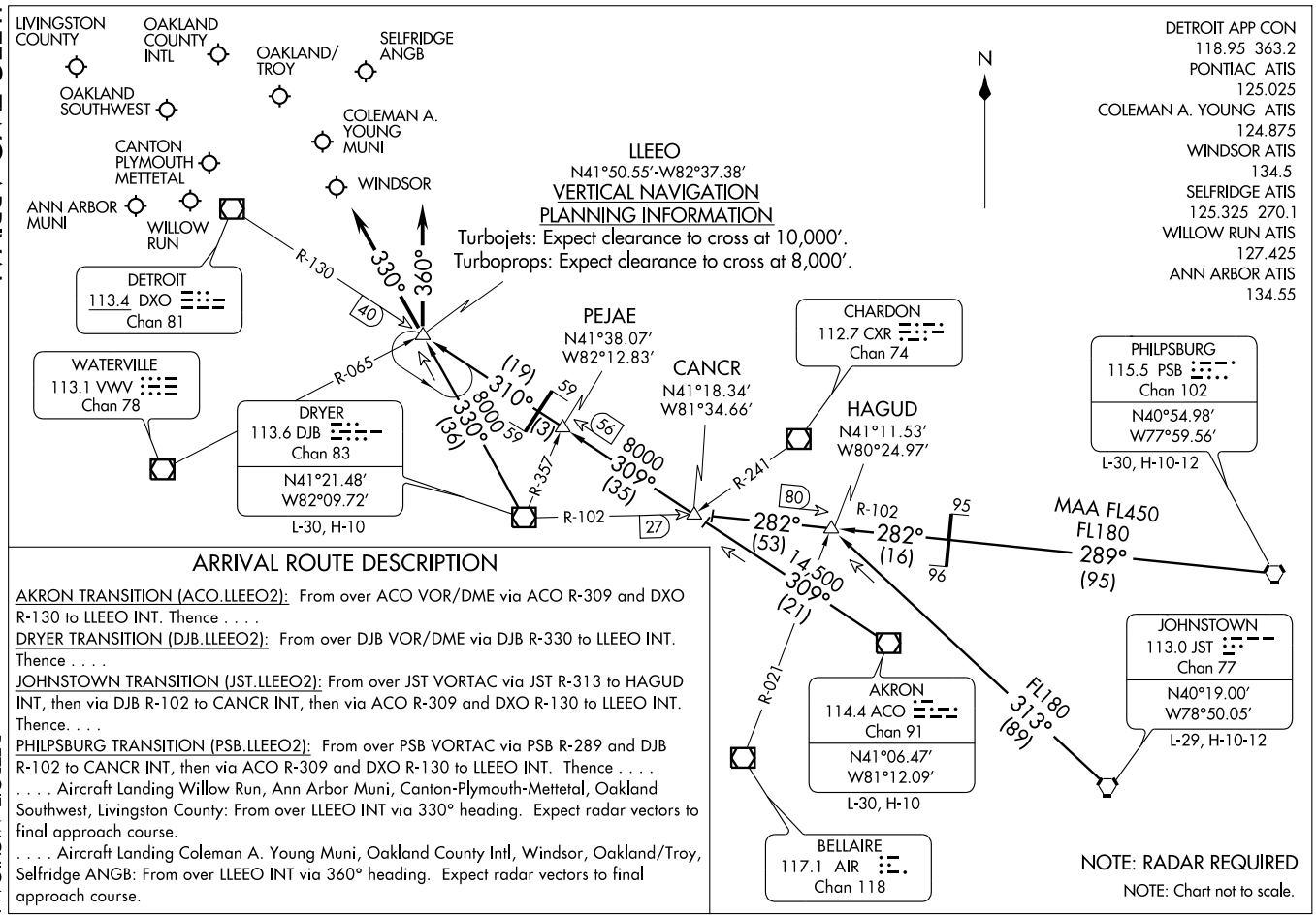
ARRIVAL DESCRIPTION

DAYTON TRANSITION (DQN.CRUXX4): From over DQN VOR/DME via DQN R-360 and JXN R-184 to DEEBE INT and FWA R-038 to CRUXX INT. Thence . . . .
FORT WAYNE TRANSITION (FWA.CRUXX4): From over FWA VORTAC via FWA R-016 to MODEM INT and DXO R-254 to CRUXX INT. Thence . . . .
LITCHFIELD TRANSITION (LFD.CRUXX4): From over LFD VORTAC via LFD R-106 to CRUXX INT. Thence . . . .

. . . . Aircraft landing Y47, PTK, 36MI, ØMI7, OZW, ONZ, 1D2, TTF, VLL: From over CRUXX INT via 025° heading.
. . . . Aircraft landing YIP or ARB: From over CRUXX INT via 050° heading.
Expect radar vector to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

LLEEO TWO ARRIVAL



ARRIVAL ROUTE DESCRIPTION

AKRON TRANSITION (ACO.LLEEO2): From over ACO VOR/DME via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

DRYER TRANSITION (DJB.LLEEO2): From over DJB VOR/DME via DJB R-330 to LLEEO INT. Thence . . . .

JOHNSTOWN TRANSITION (JST.LLEEO2): From over JST VORTAC via JST R-313 to HAGUD INT, then via DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence. . . .

PHILPSBURG TRANSITION (PSB.LLEEO2): From over PSB VORTAC via PSB R-289 and DJB R-102 to CANCR INT, then via ACO R-309 and DXO R-130 to LLEEO INT. Thence . . . .

. . . . Aircraft Landing Willow Run, Ann Arbor Muni, Canton-Plymouth-Mettetal, Oakland Southwest, Livingston County: From over LLEEO INT via 330° heading. Expect radar vectors to final approach course.

. . . . Aircraft Landing Coleman A. Young Muni, Oakland County Intl, Windsor, Oakland/Troy, Selfridge ANGB: From over LLEEO INT via 360° heading. Expect radar vectors to final approach course.

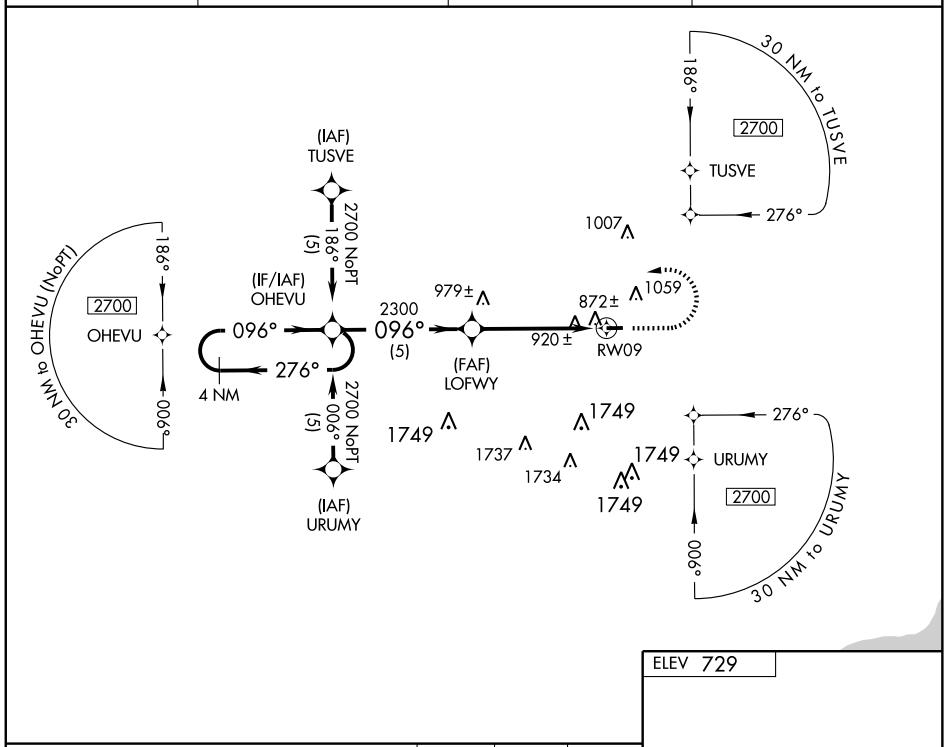
APP CRS	Rwy ldg	3549
096°	TDZE	729
	Apt Elev	729

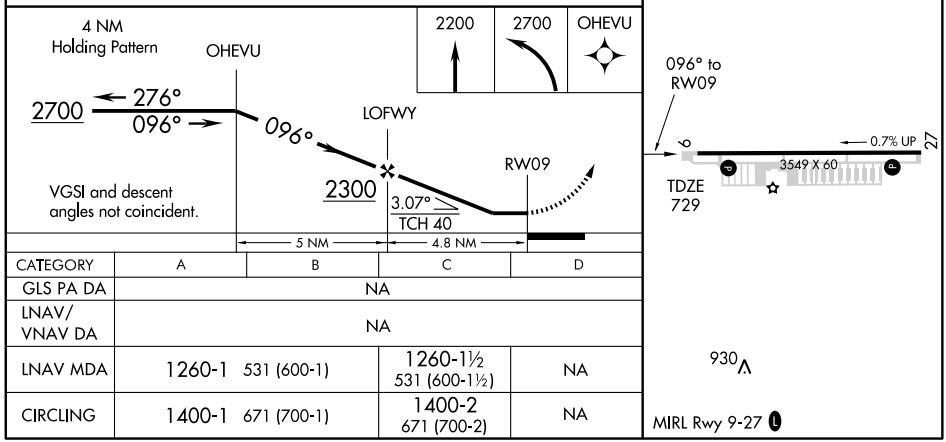
RNAV (GPS) RWY 9
TROY / OAKLAND/TROY (VLL)

DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2200 then climbing left turn to 2700 direct OHEVU WP and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
119.475	126.85 363.2	121.725	123.05 (CTAF) L





CATEGORY	A	B	C	D
GLS PA DA	NA			
LNAV/ VNAV DA	NA			
LNAV MDA	1260-1 531 (600-1)		1260-1½ 531 (600-1½)	NA
CIRCLING	1400-1 671 (700-1)		1400-2 671 (700-2)	NA

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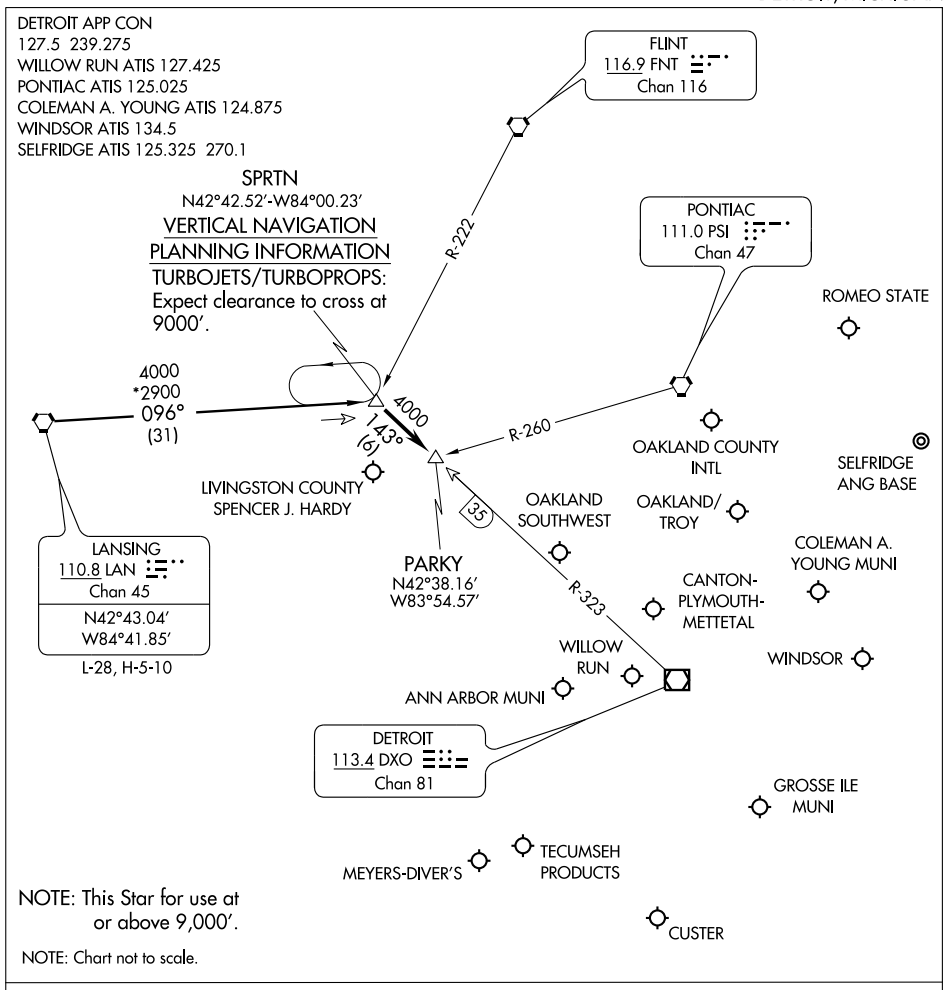
(SPRTN.SPRTN3) 09351 ST-118 (FAA)

SPRTN THREE ARRIVAL

DETROIT, MICHIGAN

DETROIT APP CON
127.5 239.275
WILLOW RUN ATIS 127.425
PONTIAC ATIS 125.025
COLEMAN A. YOUNG ATIS 124.875
WINDSOR ATIS 134.5
SELFRIDGE ATIS 125.325 270.1



NOTE: This Star for use at or above 9,000′.

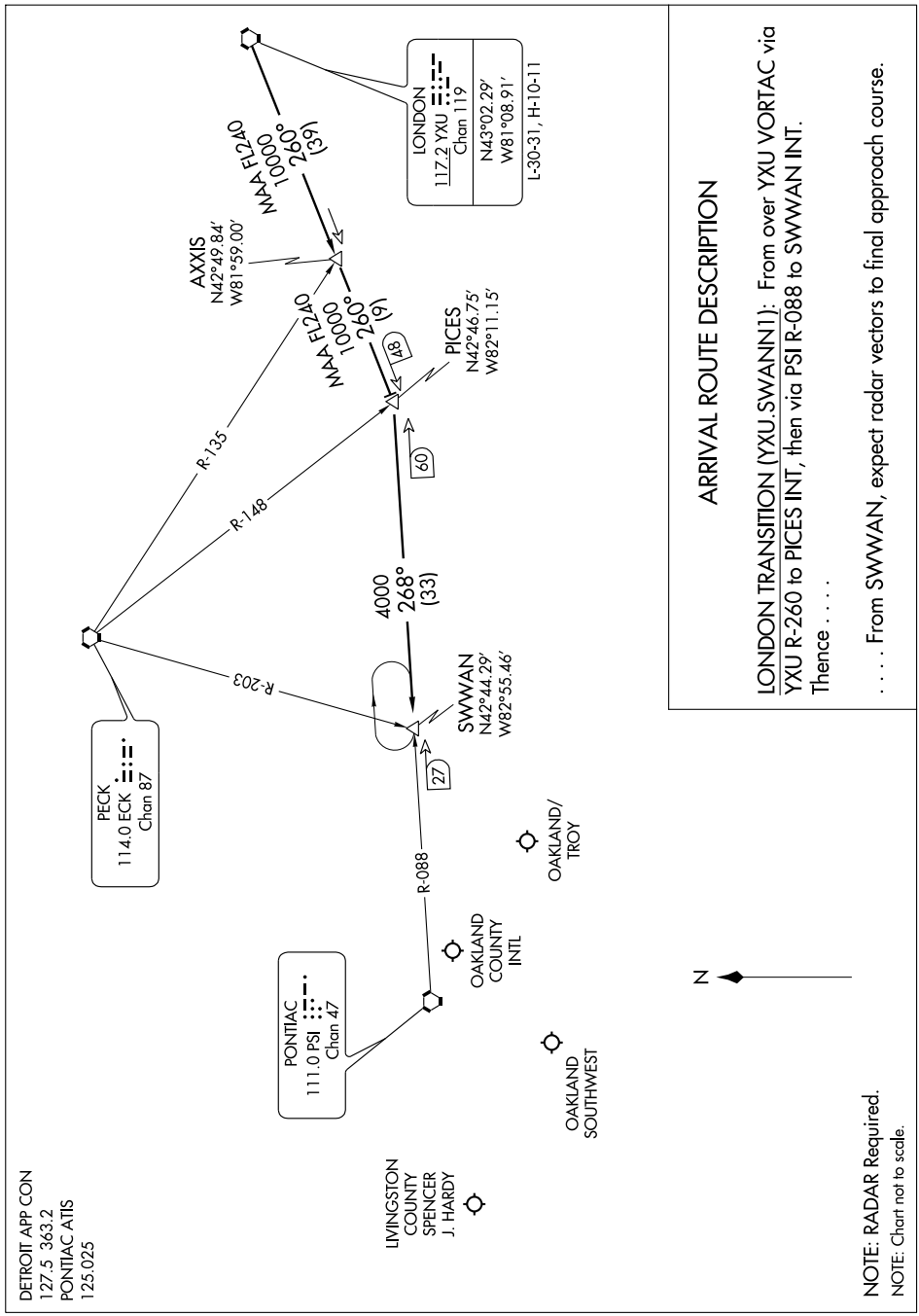
NOTE: Chart not to scale.

LANSING TRANSITION (LAN.SPRTN3): From over LAN VORTAC via LAN R-096 to SPRTN INT. Thence . . . .
. . . . Aircraft landing: DET, PTK, VLL, D98, MTC, ARB, YIP, ONZ, 1D2, TTF, Y47, 36MI, OZW, 3TE, YQG: From over SPRTN INT via DXO R-323 to PARKY INT. Thence . . . .
. . . . Expect radar vectors to final approach course.

EC-1, 14 JAN 2010 to 11 FEB 2010

SWWAN ONE ARRIVAL

PONTIAC, MICHIGAN



VORTAC PSI	APP CRS	Rwy ldg	N/A
111.0	124°	TDZE	N/A
Chan 47		Apt Elev	729

VOR or GPS-A

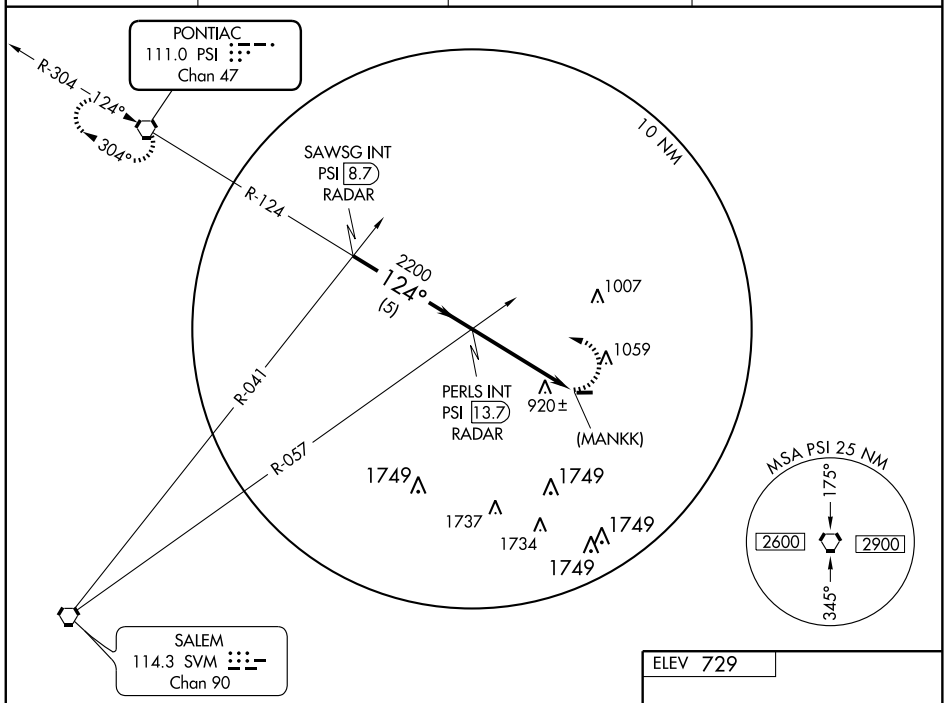
TROY / OAKLAND/TROY (VLL)

NA

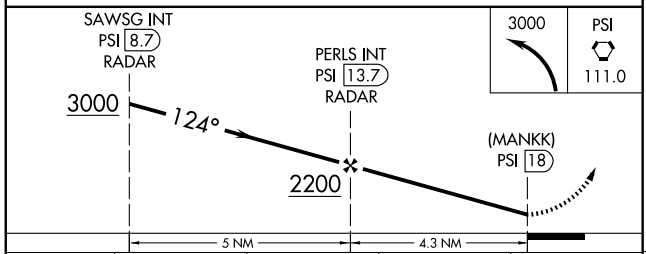
Use Coleman A. Young Muni altimeter setting.

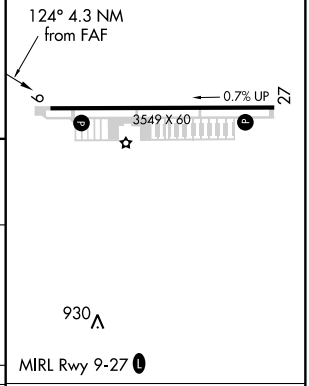
MISSED APPROACH: Climbing left turn to 3000 direct PSI VORTAC and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
119.475	126.85 363.2	121.725	123.05 (CTAF) L



RADAR REQUIRED





CATEGORY	A	B	C	D
CIRCLING	1400-1 671 (700-1)		1400-2 671 (700-2)	NA

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

EC-1. 14 JAN 2010 to 11 FEB 2010

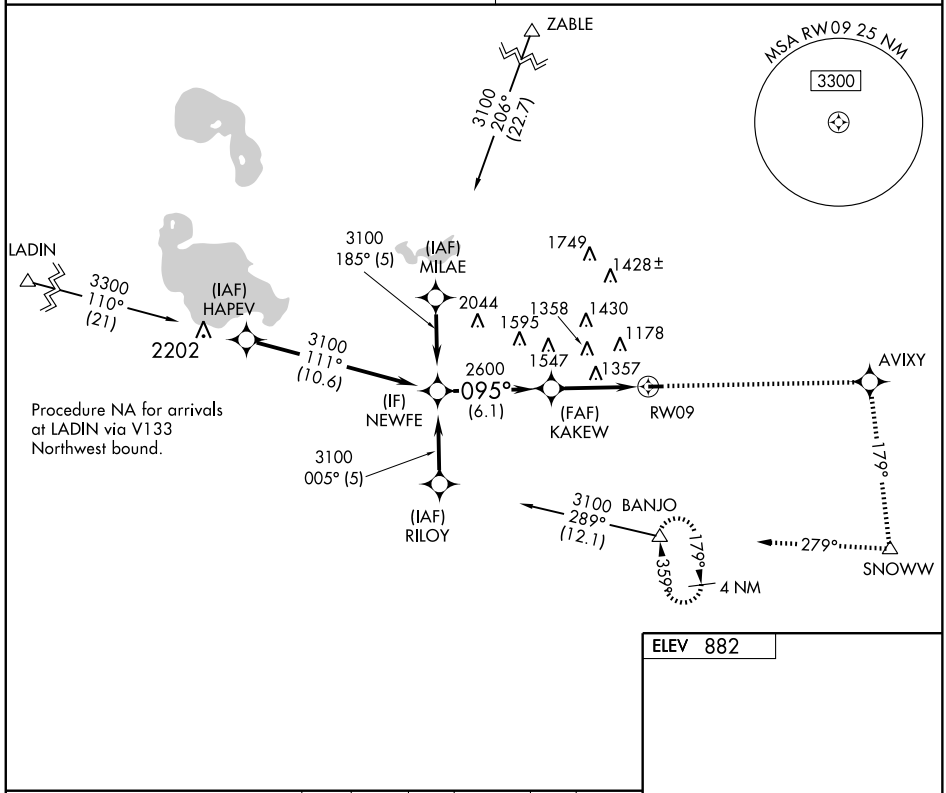
RNAV (GPS) RWY 9
WEST BRANCH COMMUNITY (Y31)

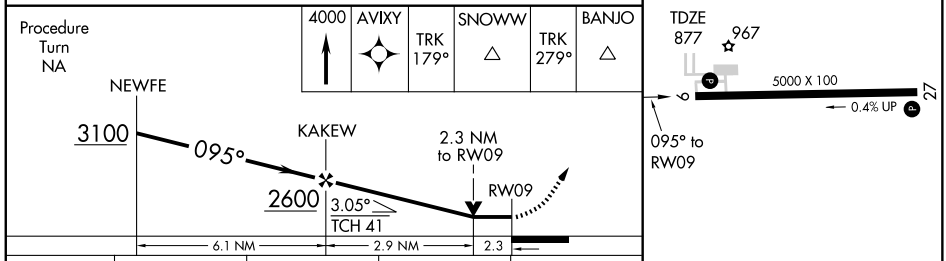
APP CRS	Rwy ldg	5000
095°	TDZE	877
	Apt Elev	882

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Saginaw Intl altimeter setting and increase all MDA 140 feet, increase LNAV Cat A visibility ¼ mile and Cat C/D ½ mile, increase Circling Cat A visibility ¼ mile and Cat C/D ½ mile.

MISSED APPROACH: Climb to 4000 direct AVIXY and via track 179° to SNOWW and via track 279° to BANJO and hold.

MINNEAPOLIS CENTER	UNICOM
118.525 251.15	122.8 (CTAF) L





ELEV 882

CATEGORY	A	B	C	D
LNAV MDA	1660-1 783 (800-1)	1660-1¼ 783 (800-1¼)	1660-2¼ 783 (800-2¼)	1660-2½ 783 (800-2½)
CIRCLING	1660-1 778 (800-1)	1660-1¼ 778 (800-1¼)	1660-2¼ 778 (800-2¼)	1660-2½ 778 (800-2½)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

APP CRS	Rwy ldg	5000
275°	TDZE	877
	Apt Elev	882

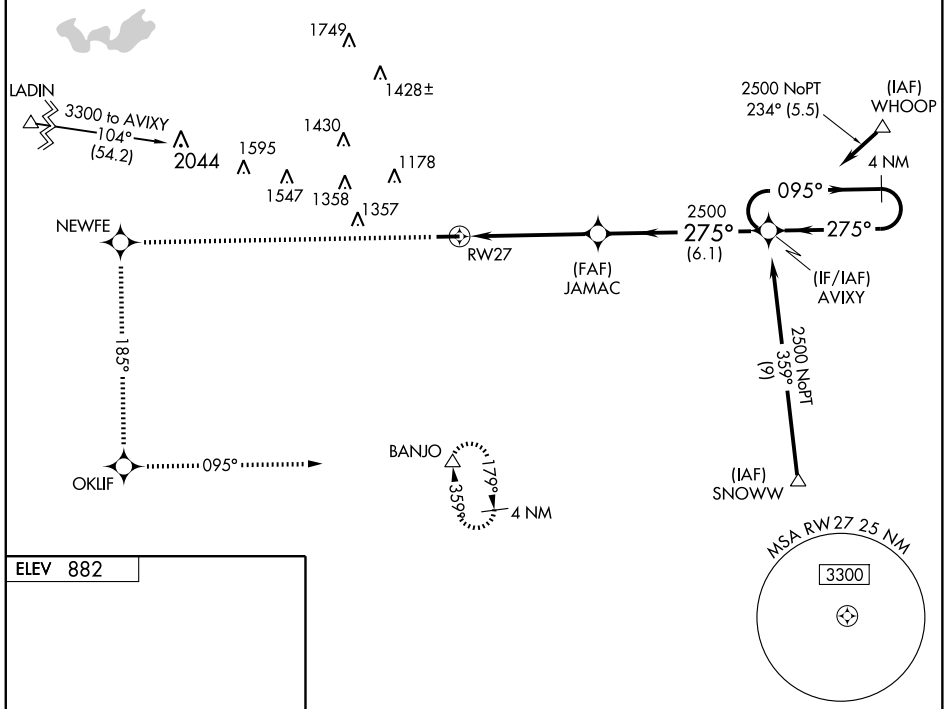
RNAV (GPS) RWY 27
WEST BRANCH COMMUNITY (Y31)

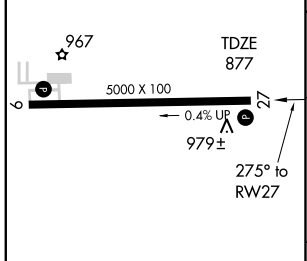
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Saginaw Intl altimeter setting and increase all MDA 140 feet, increase LNAV visibility Cat C/D ¼ mile and Circling Cat C/D visibility ½ mile.

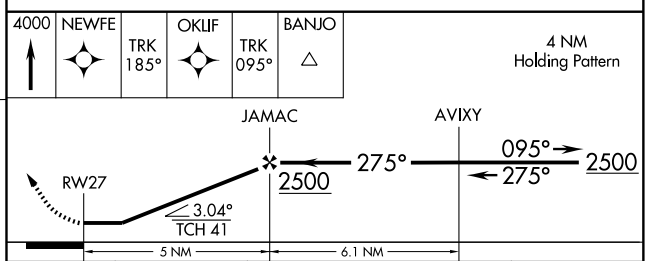
MISSED APPROACH: Climb to 4000 direct NEWFE and via track 185° to OKLIF and via track 095° to BANJO and hold.

MINNEAPOLIS CENTER	UNICOM
118.525 251.15	122.8 (CTAF) L

Procedure NA for arrivals at LADIN via V133 Northwest bound.







CATEGORY	A	B	C	D
LNAV MDA	1240-1 363 (400-1)			1240-1¼ 363 (400-1¼)
CIRCLING	1480-1 598 (600-1)		1480-1½ 598 (600-1½)	1520-2 638 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1. 14 JAN 2010 to 11 FEB 2010

VOR/DME BXZ	APP CRS	Rwy ldg	5000
113.2	269°	TDZE	877
Chan 79		Apt Elev	882

VOR RWY 27

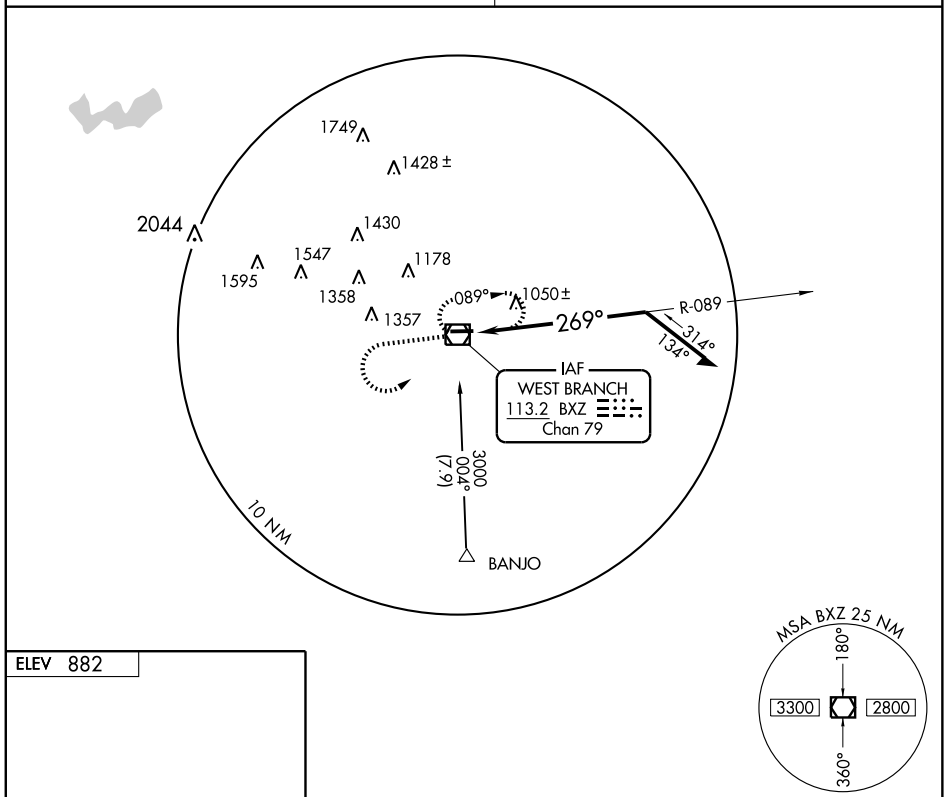
WEST BRANCH COMMUNITY (Y31)

When local altimeter setting not received, use Saginaw (MBS) Intl altimeter setting and increase all MDAs 120 feet, and all visibilities ½ mile.

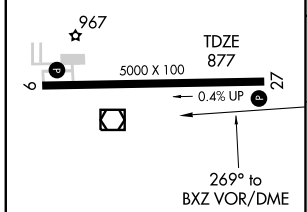
NA

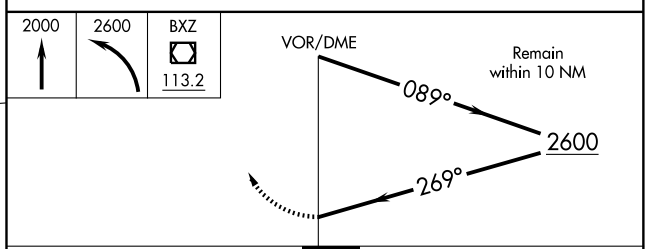
MISSED APPROACH: Climb to 2000 then climbing left turn to 2600 direct BXZ VOR/DME and hold.

MINNEAPOLIS CENTER	UNICOM
118.525 251.15	122.8 (CTAF) L



ELEV 882





CATEGORY	A	B	C	D
S-27	1360-1 483 (500-1)		1360-1¼ 483 (500-1¼)	1360-1½ 483 (500-1½)
CIRCLING	1440-1 558 (600-1)		1480-1½ 598 (600-1½)	1500-2 618 (700-2)

MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1. 14 JAN 2010 to 11 FEB 2010